NAVAL POSTGRADUATE SCHOOL
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THESIS

**ACQUISITION REFORM:
IMPACT OF CONVERSION TO
PERFORMANCE AND COMMERCIAL
SPECIFICATIONS/STANDARDS ON THE
CHEMICAL STOCKPILE DISPOSAL PROGRAM.**

by

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June, 1996

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The Chemical Stockpile Disposal Program (CSDP) was established to plan and execute the safe destruction of the nation's stockpile of unitary chemical weapons. The CSDP is unique in that it is not a weapon system production program but, a weapon system destruction program with a mandated completion date of December 31, 2004. Execution of the program requires that multiple public issues be addressed including the public's concern regarding safety and the environment. Cost growth and Environmntal Protection Agency (EPA) permit delays have jeopardized on time completion within life cycle cost estimates. Another relevant issue is reform of the acquisition process, specifically the DoD requirement to convert military-unique specifications and standards to performance statements or commercial equivalents. This research provides evidence that acquisition reform initiatives on specifications and standards has had a positive influence on program costs with no overall program schedule delays. Continued efforts in this area should enhance the ability to demilitarize the nation's deteriorating stockpile of lethal chemical weapons within projected cost while maintaining or improving the quality and safety levels currently set by the EPA. The specific recommendations provided herein are intended to assist in improving program effectiveness and efficiency.

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ACQUISITION REFORM: IMPACT OF CONVERSION TO PERFORMANCE AND COMMERCIAL SPECIFICATIONS/STANDARDS ON THE CHEMICAL STOCKPILE DISPOSAL PROGRAM

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ABSTRACT

The Chemical Stockpile Disposal Program (CSDP) was established to plan and execute the safe destruction of the nation's stockpile of unitary chemical weapons. The CSDP is unique in that it is not a weapon system production program but, a weapon system destruction program with a mandated completion date of December 31, 2004. Execution of the program requires that multiple public issues be addressed including the public's concern regarding safety and the environment. Cost growth and Environmental Protection Agency (EPA) permit delays have jeopardized on time completion within life cycle cost estimates. Another relevant issue is reform of the acquisition process, specifically the DoD requirement to convert military-unique specifications and standards to performance statements or commercial equivalents. This research provides evidence that acquisition reform initiatives on specifications and standards has had a positive influence on program costs with no overall program schedule delays. Continued efforts in this area should enhance the ability to demilitarize the nation's deteriorating stockpile of lethal chemical weapons within projected cost while maintaining or improving the quality and safety levels currently set by the EPA. The specific recommendations provided herein are intended to assist in improving program effectiveness and efficiency.

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I. INTRODUCTION

> Concern for man himself and his fate must always form the chief interest of all technical endeavor. Never forget this in the midst of your diagrams and equations.
>
> Albert Einstein

Since World War I the United States has maintained a stockpile of chemical weapons and agents as a deterrent against enemy use of biological warfare on our troops. Beginning in the 1950s the Army began the disposal of these weapons as the need for such weapons had significantly decreased. Disposal in the 1950s and 1960s consisted of ocean burial and open pit burning. During the 1970s these methods of disposal were halted as awareness of damage to the environment heightened and concerns for human health and safety due to pollution of the water, air, and earth became apparent.

An executive order was signed by President Nixon in 1969 that directed termination of the production of all unitary chemical weapons. The chemical stockpile, accumulated prior to the termination of the production program, consists of artillery projectiles, mortars, mines, rockets, bombs, and bulk containers of nerve and blister agents. These weapons are stored at eight sites within the contiguous United States and one site in the Pacific. The aging of that stockpile is causing increased risks to the safety and health of military personnel assigned to these sites and civilian communities adjacent to the storage areas due to the deterioration of the munitions and their containers. (Livingstone, 1992)

The U. S. Army's Chemical Stockpile Disposal Program (CSDP) was established to plan and execute the safe destruction of the nation's stockpile of unitary chemical weapons. The execution of this program requires that multiple public concerns be addressed. The most

recent of those concerns involves the reform of the acquisition process, specifically the requirement to convert to the usage of nongovernmental specifications and standards.

This chapter defines the scope and objective of this thesis, describes the methodology used to perform the research, and provides an outline of the thesis

A. THESIS SCOPE AND OBJECTIVE

The scope of this research is limited to an analysis of the contracting efforts in support of the CSDP--specifically, it addresses how the contracting effort is affected by the acquisition reform initiative to convert military specifications and standards to performance specifications or commercial standards. This analysis entailed identifying the agencies involved in the specification and standard conversion process for the CSDP and accessing the magnitude of the conversion effort. Future reference to specification and/or standard conversion is intended to include the efforts being expended for both types of changes, i.e., to commercial specifications or standards and to performance specifications. In conjunction with the primary research, critical issues with the potential to raise congressional or public concern and possibly impact the CSDP were also addressed.

The research objective is to identify the issues that impact the contracting efforts in support of the CSDP during the specification conversion. A specific area of concern is the affect on cost and schedule. Additionally, analysis of the data collected provides insight into the issues that generate public interest. Public concern causes congressional reaction that can impact the ability of the program manager to execute the program. Program delay causes delays in solicitation and contracting actions required to implement this public mandate. The issues of risk and safety are auxiliary items that must be considered when assessing impacts

associated with specification changes. These areas will be considered in an effort to reach an informed conclusion and to make recommendations that may mitigate their impact on the CSDP. A secondary objective is to provide recommendations on the specification revision process, and procedures that may be of future benefit to other programs involved in acquisition reform efforts to convert to commercial and performance based specifications and standards.

B. METHODOLOGY

This thesis utilizes an historical and analytical perspective to identify the range and breadth of interests in the CSDP and the impact that actions to convert to commercial and performance specifications may have on that program. Literature searches were made using the resources available at the Naval Postgraduate School Dudley Knox Library, the Defense Technical Information Center (DTIC), and the Defense Logistics Studies Information Exchange (DLSIE). These searches provided background and historical information regarding the CSDP and acquisition reform initiatives. Congressional Hearings, General Accounting Office Reports, legislation, Inspector General Reports, and audits from the Defense and Army Audit Agencies were included in the reviews as well as articles from periodicals and publications addressing the chemical stockpile, specification preparation, acquisition reform, and contracting procedures.

Telephonic information searches were conducted to identify the Army and Defense offices involved in the CSDP and the specification acquisition reform initiative. Points of contact were established at the following offices:

- U.S. Army Chemical Destruction and Remediation Agency (USACDRA): Program Manager (PM).

- U.S. Army Industrial Operations Command (IOC): Procuring Contracting Officer (PCO).

- U.S. Corps of Engineers (COE): Administrative Contracting Officer (ACO) and agency designated to prepare construction specifications.

- U.S. Army Materiel Command (AMC): Procurement Policy Oversight Authority for IOC.

- Assistant Secretary of the Army for Research, Development, and Acquisition (ASARDA): Milestone Decision Authority (MDA).

- Office of the Deputy Under Secretary of Defense for Acquisition Reform: Defense Acquisition Board (DAB) Chair.

Questions were prepared for interviews with personnel involved in the planning and execution of the CSDP and the conversion of military specifications and standards to performance specifications. The interview questions shown in Exhibit B support the primary and subsidiary research questions set forth below.

Primary: What impact will the acquisition reform requirement to use performance specifications have on the CSDP contracting efforts?

Subsidiary:

1. What is the nature and extent of the CSDP and what are the critical issues associated with it?

2. What are the activities necessary to convert current specifications to predominantly performance specifications?

3. What is the affect on schedules and cost to accomplish this conversion process?

4. What are the potential effects of the conversion process on EPA approvals and certification requirements?

5. To what extent will contract type for the CSDP be affected by predominant use of performance specifications? What measurement techniques could be used to evaluate contractor performance?

During the interviews it became apparent that the effort of conversion to commercial specifications and standards was not distinguishable from the endeavors to move to performance specifications and standards. The questions were appropriately amended at the time of the interviews to include commercial specifications and standards. Much of subsidiary question one was answered during the literature search and the telephonic search for agency points of contact. Additional information was provided during interviews with personnel from the Program Manager's (PM) office and the PCO. Responses were received from the PM's office, PCO, ACO, AMC and ASARDA in support of subsidiary questions two and three. The PM was the critical source of information for analysis of subsidiary question four. Subsidiary question five was primarily addressed by personnel in the contracting offices.

C. THESIS OUTLINE

Chapter I. Introduction. This chapter defines the scope and objective of this research, describes the methodology used to perform the research, and provides an outline of this thesis.

Chapter II. Chemical Stockpile Background. Chapter II provides insight into the nature of and the critical issues associated with the CSDP. The statutory requirements of the program are set forth and discussed. The environmental considerations that must be addressed during the program execution are summarized. Finally, discussion of the approved acquisition strategy and how the congressional and public interests molded that strategy is presented.

Chapter III. Acquisition Reform Initiative. In this chapter the acquisition reform initiative requiring conversion to commercial specifications or standards and performance based specifications is examined. The Department of Defense (DoD) policy on specifications and standards is set forth and the Army's implementation plans and initiatives in this area of acquisition reform is detailed.

Chapter IV. Chemical Stockpile Disposal Program Specification Reform. This chapter describes the actions taken to comply with the DoD direction to convert to performance specifications. The resource expenditures and schedule impacts reported by the conversion activities as necessary to accomplish the specification conversions are summarized. The actual or anticipated affects that the conversion process may have on EPA approvals or certification requirements are discussed. This chapter also examines the measurement techniques that the contracting office anticipates using to evaluate contractor performance and the potential affect that conversion to performance specifications may have on the type of contract used for the program.

Chapter V. Analysis. Chapter V sets forth an analysis of the data collected and discussed in Chapter IV. It contains an analysis of the process and procedures being used to accomplish the conversion process. Cost and schedule impacts that have been incurred or that are anticipated in conjunction with the CSDP are assessed and scrutinized for efficiencies or potential inefficiencies. An evaluation of forecast affects on EPA approval and certification requirements is made based on the assessment of data received. Techniques anticipated for use to measure contractor performance using the converted specifications is compared to measurement techniques used in previous contracts. Finally, the contract type planned for the

CSDP after implementation of performance specifications is discussed.

Chapter VI. Conclusions and Recommendations. This chapter summarizes the research findings and conclusions resulting from the analysis, and makes recommendations aimed at improving the specification conversion process.

D. DEFINITIONS AND ACRONYMS

Definitions and acronyms common to DoD, the U.S. Army, and civilian agencies of the Government are used throughout this thesis. A listing of definitions and acronyms is provided at Appendix A.

II. CHEMICAL STOCKPILE PROGRAM BACKGROUND

A. CSDP BACKGROUND

Germany first used poison gas in World War I on April 22, 1915, during the Second Battle of Ypres. In response to the threat posed by Germany during World War I, the United States began the development of chemical weapons. (Heller, 1984) With the changing threat, Russia and the Warsaw Pact countries developed and amassed about 40,000 tons of chemical weapons as an offensive weapon. In turn, the United States produced its own arsenal of chemical weapons and chemical defense tactics and equipment. The bulk of this 25,000 to 30,000 ton stockpile of unitary chemical weapons is now at least 25 years old, with some munitions as old as 45 years. (Foote, 1994)

Unitary chemical weapons contain agents that, by virtue of their molecular composition and structure, are highly toxic and lethal in themselves. Binary chemical munitions were designed to avoid the dangers of storing lethal chemical agents in that they were loaded with two relatively safe chemicals in separate compartments within a single projectile. The munition becomes lethal only when the two chemicals are mixed together. Accordingly, the components of binary munitions are stockpiled apart, in separate states. (NRC, 1994) This paper addresses the unitary weapon stockpile only.

During the 1950s and 1960s chemical weapons were destroyed by ocean burial and open pit burning. An environmentally safe procedure for destruction of the military's unitary weapon stockpile was sought during the late 1960s as ocean dumping and open pit burning were no longer viable due to environmental and health considerations. In 1969 a then state-

of-the-art incineration facility was constructed at Rocky Mountain Arsenal (RMA) in Colorado. There was opposition to the incineration operation at RMA from several citizen groups, states, and environmental organizations. Concerns were raised by these groups pertaining to adverse health effects as dioxins and furons present in some emissions had been linked to cancer and other long-term health problems. As a result of the opposition, operations at RMA were discontinued in 1976. (GAO, 1994)

The Army pursued studies with academia, industry and other agencies to determine if alternate technologies existed that would be suitable for destroying the chemical weapons. The National Academy of Sciences (NAS) recommended construction of large industrial type disposal plants that would be capable of destroying chemical munitions without being hazardous to the public health or environment. Based on these recommendations and the lesson-learned from the RMA disposal operations, the Army constructed and in 1979 began operation of a pilot Chemical Agent Munitions Disposal System (CAMDS) facility at Tooele Army Depot (TEAD) in Utah. The purpose of this facility was to test a prototype high temperature incineration process and to explore other alternatives and improvements to the demilitarization process. (HR, 1985)

In 1981 as a result of the testing at the CAMDS facility, the Army chose direct high temperature incineration as the best and safest method for destroying chemical weapons and agents. That same year the DoD named the Army the Defense Single Item Manager for all ammunition, to include chemical weapons. At that time the Army established a Program Manager for Chemical Demilitarization (PMCD) and began development of disposal alternatives. (Livingston, 1992)

The Department of Defense Authorization Act for 1986 [Public Law (PL) 99-145, Section 1412] mandated disposal of the United States stockpile of unitary lethal chemical agents and chemical agent munitions by September 30, 1994 (AMCCOM, 1992). Subsequent legislation extended the deadline to December 31, 2004. The PMCD had developed four alternatives for chemical weapon disposal by the time Congress enacted PL 99-145. The first alternative was to construct a national disposal center at TEAD. This would require 51 percent of the stockpiled chemical weapons to be transported through 20 states. The second alternative was to establish two regional disposal centers. One center would be located in the west at TEAD. The other facility would be in the east at Anniston Army Depot (ANAD) in Alabama. This option would require transport of 21.5 percent of the stockpile through five western states, and 22.4 percent through midwestern and eastern states. Onsite disposal was the third alternative. This alternative would establish disposal facilities at each of the eight continental United States (CONUS) unitary chemical weapon storage sites. Option three would not require off-post transportation of the chemical weapons. Figure 1 shows the sites where unitary chemical weapons are stored. The eight CONUS and one outside CONUS sites are:

- Aberdeen Proving Ground (APG), Edgewood, Maryland.
- Anniston Army Depot (ANAD), Anniston, Alabama.
- Blue Grass Army Depot (BGAD), Richmond, Kentucky.
- Newport Army Ammunition Plant (NAAP), Newport, Indiana.
- Pine Bluff Arsenal (PBA), Pine Bluff, Arkansas.
- Pueblo Depot Activity (PUDA), Pueblo, Colorado.
- Tooele Army Depot (TEAD), Tooele, Utah.
- Umatilla Depot Activity (UMDA), Hermiston, Oregon.
- Johnston Island, Johnston Atoll, Pacific. (HR, 1986)

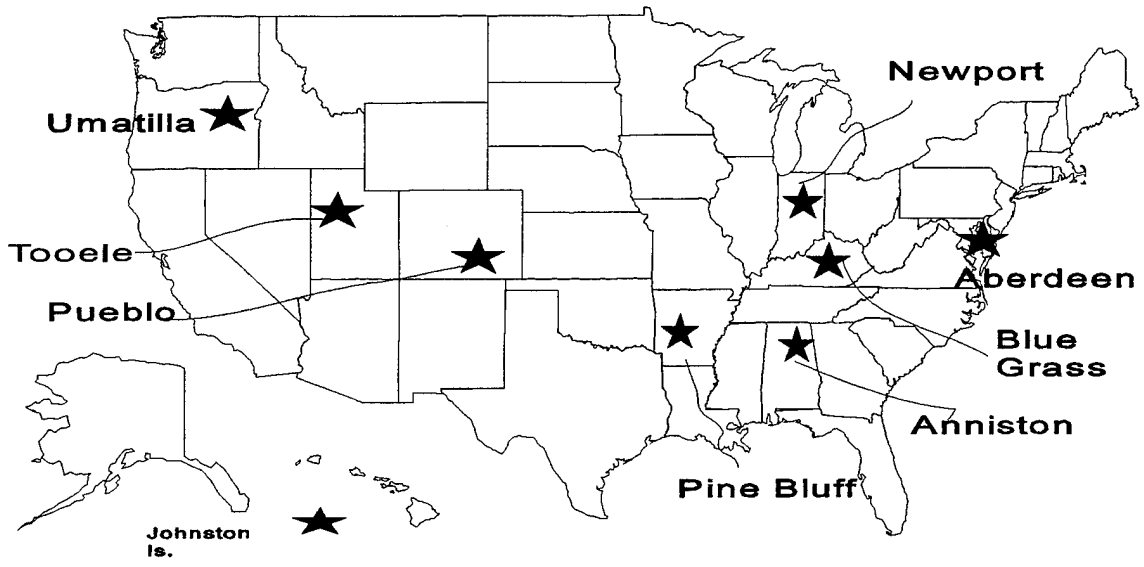


Figure 1. Location of Unitary Chemical Weapons Storage Facilities

Alternate four was to continue storage and maintaining the stockpile in place. After PL 99-145 was enacted, alternate four was no longer an option. Due to the risks involved in the transportation of these toxic chemicals through highly populated areas, the third alternate was selected. (HR, 1986) Figure 2 indicates the percentage of the stockpile at each CONUS location as reported in 1993 by the National Research Council. The chemical stockpile consists of two types of unitary lethal chemical agent, nerve agents (GA(Tabun)),

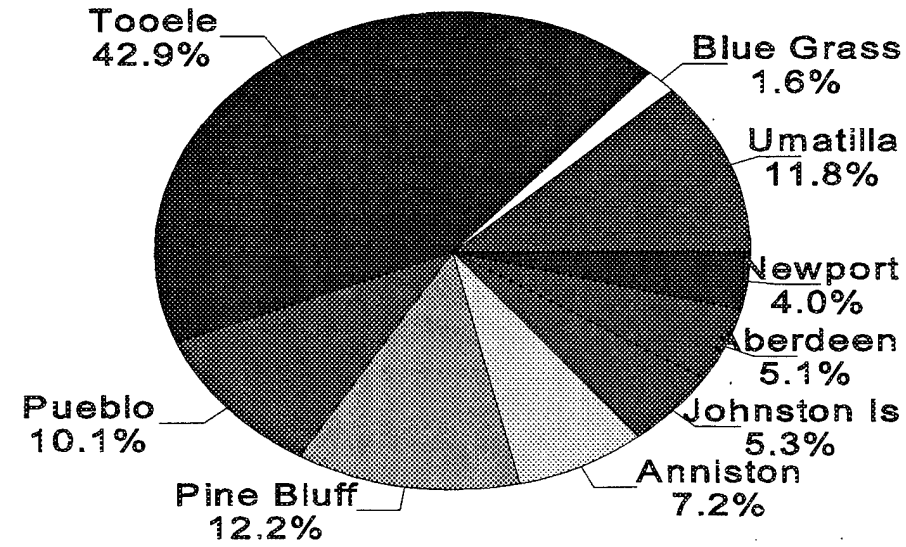


Figure 2. Stockpile Distribution by Percentage of Agent Tonnage

GB (Sarin and VX)), and blister agents (H. HD, HT (Mustard), and L (Lewisite)). Nerve agents are the most lethal of the chemical agents. These agents inhibit the body's nervous system from normal operation, including the nerves that control the diaphragm. In cases of lethal exposure, death is caused by asphyxiation. Mustard agents burn the eyes and lungs and blisters the skin. (NRC, 1993)

Table 1 reflects the composition of the unitary stockpile by storage activity. The stockpile is stored in a variety of containers: one-ton bulk containers, spray tanks, artillery projectiles, mines, mortar rounds, and rockets. Many of the munitions also contain propellant

and explosive components. (NRC, 1993) Those activities marked with an asterisk have M55 rockets with deteriorating containers which escalates storage dangers. (GAO, 1994)

In late 1985, the U.S. Army began construction of the world's first fully integrated chemical munitions destruction facility on Johnston Atoll for destroying the weapons stored

Location	Type Munition	Amount
TEAD, Utah*	Blister Agents H, HD, & HT Nerve Agents GB & VX All Combinations	13,616 tons 1,155,708 pieces
PBA, Arkansas*	Blister Agents HD & HT Nerve Agents GB & VX Mines, Rockets, Ton Containers	3,850 tons 180,216 pieces
UMDA, Oregon*	Blister Agent HD Nerve Agents GB & VX All Combinations	3,717 tons 461,927 pieces
PUDA, Colorado	Blister Agent HD & HT Projectiles and Cartridges	2,611 tons 780,078 pieces
ANAD, Alabama*	Blister Agents HD & HT Nerve Agents GB & VX Projectiles, Cartridges, Mines, Rockets, Ton Containers	2,254 tons 661,529 pieces
APG, Maryland	Blister Agent HD-- 1, 818 Ton Containers	1,625 tons
NAAP, Indiana	Nerve Agent VX-- 1,690 Ton Containers	1,269 tons
BGDA, Kentucky*	Blister Agent H Nerve Agents GB & VX Projectiles, Cartridges, Rockets, Ton Containers	523 tons 101,764 pieces
Johnston Atoll* (As of Jan 96-- Active Demil)	Blister Agent HD Nerve Agents GB & VX All Combinations	1,001 tons 292,121 pieces

Table 1. Chemical Stockpile Composition by Site (Ruane, 1996)

or transferred to that site in the Pacific. The design of the Johnston Atoll Chemical Agent Disposal System (JACADS) was based on the lessons learned at the TEAD CAMDS disposal facility and is the prototype facility for the eight plants to be constructed in CONUS. The construction, systemization, operation, and maintenance of the Johnston Atoll facility has been closely monitored by the PMCD for the purpose of developing the specifications and standards to be used for the CONUS facilities. The JACADS lessons learned provided significant data on each type of weapon to be destroyed. The EPA monitored the performance at JACADS closely to verify emission levels and identify problems that may occur during the operational phase of the CONUS facilities.

In addition to the legislation directing destruction of stockpiled unitary chemical weapons, the Chemical Weapons Convention (CWC) further supports United States policy and resolve in this area. The proliferation of chemical weapons to what is believed to be several dozen countries has increased interest in the execution of the CWC. (Smithson, 1995) The United States played a decisive role in negotiating the treaty. As early as 1984, then Vice President Bush offered the draft CWC text. (Smithson, 1995) In September 1989, the United States and the Soviet Union signed a Memorandum of Understanding regarding a bilateral verification experiment and data exchange related to the prohibition of chemical weapons. In June of 1990 the United States and the Soviet Union signed the Agreement on Destruction and Non-production of Chemical Weapons and issued a joint statement on nonproliferation. The leadership and demonstrated resolve of the United States to destroy its stockpile of chemical weapons encouraged the international community to take action. Secretary of State Eagleburger signed the CWC for the United States in January 1993. The

CWC requires that all signatory nations completely destroy all chemical weapons and all chemical weapon production facilities within ten years after the CWC enters into force. The CWC is expected to go before the United States Senate for ratification in 1996. (Smithson, 1996)

B. STATUTORY REQUIREMENTS

The PMCD and the contracting activity must comply with a variety of statutory and regulatory requirements in the execution of this high profile program. The nature of the CSDP has caused congressional level interest as early as the 1960s due to the public interest issues of the environment, health, and safety. As a result the Army has had congressional assistance and direction for each major program decision. In addition to the programmatic direction included in various appropriation acts, the PMCD must comply with procurement statutes and regulations and environmental legislation at the Federal and state levels. This section will discuss the environmental regulations that apply to the program, the legislative and regulatory requirements that have influenced the CSDP acquisition strategy, the planned contracting strategy, and the acquisition reform initiatives that may have a potential impact on the program.

1. Environmental Considerations

Secretary of Defense Dick Cheney emphasized President Bush's desire for the United States to be the world leader in addressing environmental problems and established the DoD environmental management policy by memorandum dated October 10, 1989. The memorandum is at Appendix C. In the memorandum Secretary Cheney states:

> We need to work harder at telling our environmental success stories and solving our problems in an open, cooperative way with the public and also appropriate regulatory authorities. The universal recognition of effective DoD environmental compliance and stewardship activities is the surest way to maintain our access to the air, land, and water we need to maintain and improve our mission capability.

The statement of work and the contracting efforts for CSDP must be carried out with utmost care to ensure that the required Environmental Protection Agency (EPA) pollution control standards are met and that public health is safeguarded. The EPA was created in 1970 as a result of the increasing awareness of damage to the environment. The EPA is tasked with ensuring compliance with over 56 environmental laws at the Federal level. Table 2 sets forth the major pieces of environmental legislation with which the PMCD and the contracting agency must be in compliance. The most significant enactments are discussed below.

a. National Environmental Policy Act (NEPA)

NEPA was enacted as PL 91-190 on January 1, 1970, to promote efforts that will prevent or eliminate damage to the environment. It directs all Federal agencies to consider environmental values in decision making and requires preparation of Environmental Impact Statements (EIS) that must become a matter of public action and record prior to the agency taking any action. An EIS must be conducted prior to commencing the construction of facilities or the changing of basic operations at an installation or activity that may affect the environment. (Kubiak, 1994) This means that a site specific EIS must be prepared for each of the sites where chemical weapon destruction facilities are planned for construction. It also means that should there be any alterations in the destruction methods that would change how

ENVIRONMENTAL LEGISLATION

TITLE	Yr.	Major Provision(s)
National Environmental Policy Act (NEPA)	1970	Requires Environmental Impact Statement (EIS) for new facilities and EIS amendments for changes in operation of existing facilities
Clean Air Act (CCA)	1970	Prevention, control, and reduction or air pollution emissions by major contributors such as military installations
Clean Water Act (CWA)	1972	Regulates pollutants being dumped into nation's waterways
Resource Conservation and Recovery Act (RCRA)	1976	Cradle-to-grave tracking and record keeping of hazardous materials, including disposal of demilitarization waste by products
Toxic Substances Control Act (TSCA)	1976	Authorizes EPA to regulate toxic chemical from manufacturing through disposal
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)	1980	Created the Superfund for hazardous substance cleanup programs and makes Federal agencies financially liable for cleanup
Energy Planning and Community Right-to-Know Act (EPCRA)	1986	To provide information to the general public about chemicals to which they may be exposed and develop plans of action in the event of accidental release
Clean Air Act Amendments (CAAA)	1990	Establishes Federally mandated minimum standards and assigns states the responsibility to assure air quality
Federal Facilities Compliance Act (FFCA)	1992	Waives the sovereign immunity of Federal facilities under RCRA

Table 2. Environmental Legislation Impacting the CSDP (O'Leary, 1993)

the facility operates, an amendment must be prepared and submitted. The EIS is a time consuming process that may take over a year to prepare and over two years for the EPA to review. (GAO, 1990)

b. Clean Air Act (CAA) and Clean Air Act Amendments (CAAA)

The CCA requires the EPA to establish National Ambient Air Quality Standards (NAAQS) for each air pollutant that is reasonably expected to endanger public health or welfare. The NAAQS are enforceable limits established for six criteria pollutants (ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, inhalable particulate matter, and lead). New source reviews by the EPA imposes permit requirements for new major sources of air pollution such as the demilitarization facilities. (Williamson, 1992) The CAAA imposes more stringent requirements, including the attainment program and the operating permit program. Under the CAAA, areas where air quality is acceptable for a specific criterion pollutant are designated as in attainment. Areas that do not meet the NAAQS are known as nonattainment areas and fall under stricter regulation. Two stockpile sites, APG and BGAD, are located in nonattainment areas for a criterion pollutant (ozone). (Foote, 1994)

Army demilitarization facilities are required to comply with all Federal, state, and local air pollution requirements to the same extent as any nongovernmental entity. A demilitarization facility is an emission source for the following criteria pollutants: (1) sulfur dioxide, (2) carbon monoxide, (3) nitrogen oxides, and (4) particulate matter. If a demilitarization facility is to be built on an installation that is already a major stationary source of air pollution, then the Army must evaluate the potential emissions from the proposed facility to determine if its operation will result in a significant increase at the installation. If

it does, then the plant is a major modification which requires either a Prevention of Serious Deterioration (PSD) permit or a nonattainment area permit. (USAEHA, 1992) The PSD permit is required when an installation is in an area where the air quality standards prescribed by the EPA are being met and the installation is proposing to build a facility that will contribute to pollution but should not cause serious deterioration to air quality. All the proposed demilitarization sites are located in areas that allow for moderate, well-controlled industrial growth and will require PSD permits. (Foote, 1994) Processing any form of environmental permit is not an expeditious process. Subchapter V of the CAA requires the air permit authorities to either issue or deny a permit within eighteen months. However, regulators have the discretion to determine when an application is complete and, if they are so inclined, can find some defect that renders a permit incomplete, thus delaying permit issuance and impacting planned operations. (Foote, 1994)

c. Resource Conservation and Recovery Act (RCRA)

The RCRA established the first comprehensive national strategy for the management of ongoing solid and hazardous waste operations. This Act provides for a cradle-to-grave tracking system of hazardous materials and includes record keeping on the generation, transportation, storage, and disposal of these materials. RCRA is the primary compliance document regarding hazardous waste management and policy. (Kubiak, 1994) The CSDP must comply with this Act as its guidelines consider liquids, sludge, or contaminated gasses as solid wastes. Additionally, the Federal Facilities Compliance Act (FFCA) waives the sovereign immunity of Federal facilities. However, the FFCA provides authorization for Federal agencies to pay for inspections and monitoring activities by state

regulators which had been previously delayed due to lack of staff and resources to process and issue permits and their modifications for the demilitarization facilities. (Foote, 1994)

As treatment facilities for hazardous waste, the Army's demilitarization incinerators must achieve a destruction and removal efficiency (DRE) rate of at least 99.99 percent for the principal organic hazardous constituents, except for the liquid incinerators, which must achieve a DRE rate of 99.9999 percent. A DRE of 99.99 percent means that 9,999 molecules of a compound are destroyed for every 10,000 molecules that enter the incinerator. Each facility has four incinerators as follows: Liquid Incinerator, Metal Parts Furnace, Deactivation Facility, and Dunnage Incinerator. The DRE rates will be included in the permits issued for each of the facilities based on the state and the EPA assessment of the results of the trial burns during the systemization phase of facility operations. Each facility must perform treatment operations within the ranges specified in the permit received for that facility. (USACMDA, 1993)

d. Toxic Substances Control Act (TSCA)

The TSCA authorizes the EPA to regulate new and existing chemical substances and mixtures. The EPA is authorized to collect information on and regulate production, processing, storage, distribution, use, and disposal of toxic chemical. It requires testing of chemicals entering the environment and regulates their release. (Murdock, 1994) Trial burn data are required to obtain the permit required under TSCA to operate the Army's planned demilitarization facilities. (Foote, 1994)

e. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

CERCLA was enacted in 1980 and created the Superfund for the hazardous substance cleanup program. This Act makes waste generators and operators liable for response costs and for damage to the environment. An amendment to the Act in 1986 strengthened the EPA's existing authority to effect cleanup actions by making Federal agencies financially liable for cleanup and damage costs. (Murdock, 1994) The question to be resolved for the CSDP is whether it is possible to provide indemnification for CERCLA liability. Open-ended indemnification provisions are prohibited in Government contracts because they violate the Anti-Deficiency Act. The Anti-Deficiency Act prohibits the creation of an obligation of Federal funds prior to congressional appropriation for the purpose of the obligation. In considering a contractor's request for indemnification, the Government must protect the public interest by ensuring that contractors are held accountable for environmental compliance, while effecting an equitable distribution of the potential liability. (Foote, 1994)

f. Energy Planning and Community Right-to-Know Act (EPCRA)

The EPCRA was designed to support state and local emergency planning efforts and information concerning potential hazards in their communities. Manufacturers are required to report to the state and EPA the amounts of over 300 toxic chemicals that they release into the environment or transfer to waste treatment or disposal facilities. The Act extends to current Government-Owned/Contractor-Operated (GOCO) facilities as well as those planned for the CSDP. GOCO facilities are required to develop plans for evacuation and medical treatment in the event of a chemical release. (Shulman, 1992) Mock exercises

of the plans developed in compliance with this Act are currently being executed at storage sites.

g. State Laws Affecting the Demilitarization Program

States where demilitarization operations are to be conducted are enacting laws which seek to regulate operations in their particular state. While states may regulate demilitarization facilities, the Supremacy Clause of the United States Constitution (Article VI, Clause 2), preempts a state from passing laws that operate to unreasonably restrict the operation and purpose of Federal law. Otherwise, the states would be free to engage in a never ending spiral of increasing regulatory requirements, designed to send the stockpile to another "more deserving state" for treatment. The effect would be to sink the CSDP in a morass of state statutory and regulatory requirements, thus defeating the will of Congress. (Foote, 1994)

2. Legislative Background

The acquisition strategy for the CSDP has been shaped by legislation since 1986 and prior to that by public policy. As the background of the program indicates, the Army had been responsible for the management and disposal of obsolete chemical weapons since the 1950s. Due to growing environmental concerns and international issues regarding the storage and destruction of chemical agents, substantial pressure was brought to bear on the Army to proceed expediously but cautiously with this program. This section will discuss the legislation that has shaped the program and the strategy developed to execute the CSDP acquisitions.

a. Department of Defense Authorization Act of 1986

The genesis of the CSDP was the DoD Authorization Act of 1986. It mandated the destruction of the stockpile of unitary chemical weapons, provided a separate DoD account to fund all activities, and required the Secretary of Defense to establish a management organization in the Department of the Army to carry out the mission. The Act required that a general officer be designated to direct the management organization. The Act prohibited future use of the demilitarization facilities once the destruction of the stockpile was complete. This was intended to assure communities living near the stockpile sites that the facilities would not be used as hazardous waste disposal sites after stockpile destruction. (Foote, 1994)

Prior to the 1986 Authorization Act, the Army had built the CAMDS facility at TEAD to test a prototype high temperature incinerator process and to explore improvements to the neutralization process. The result of that research effort was the selection of the baseline technology (high temperature incineration) as the best and safest method for destroying chemical weapons. In 1984, the National Research Council (NRC) of the NAS endorsed incineration as the safest and preferred method for the stockpile destruction. Following the CAMDS tests, the Army requested $46 million to fund the construction of the first disposal facility at Johnston Atoll. The Congress funded that request in 1985. The Army obtained the environmental documentation and designed the Johnston Atoll facility to have the capability to destroy all munition types stored at that site. When the 1986 Act was passed, the Army only requested funds for the additional equipment, no redesign was necessary. (Livingstone, 1992)

With the approval to construct the Johnston Atoll facility, the CSDP had accomplished the concept development for the technology to destroy the stockpile and was entering into the engineering development and prototype phase of the program. At this point there was no actual operational data or production experience from which to estimate initial program requirements. As a result the initial overall program costs were projected to be $3.2 billion. (Livingstone, 1992) Because the program did not meet the criteria for a major acquisition program, there was no requirement for program reviews or the requisite documentation that is required for major programs at Headquarters Department of the Army (DA) or DoD level. The PM reported to the Assistant Secretary of the Army (Installations, Logistics, and Environment) (ASAILE) which had been designated as the oversight authority for the acquisitions required by the program.

b. National Defense Authorization Act for Fiscal Years (FY) 1988 and 1989

This Act extended the stockpile elimination deadline from 1994 to April 30, 1997, and prohibited equipment prove out and systems testing of a full-scale demilitarization facility in CONUS until Operation and Verification Testing (OVT) was successfully completed at JACADS. It also required that the Army submit a Final Programmatic EIS on the CSDP by January 1, 1988. The Record of Decision (ROD) that was required to be submitted with the EIS identified on-site incineration as the preferred method of destruction. (Foote, 1994) The overall affect of this legislation was to delay planning for the CONUS facilities.

c. National Defense Act for FY 1991

Congessional concern about the safety status and integrity of the stockpile prompted this legislation. The Army was required to provide in its annual report to Congress an estimate on how much longer the stockpile could continue to be stored safely. It also required the Secretary of Defense to develop a plan setting forth the steps that would be taken if the stockpile deteriorated at a more accelerated rate than had been projected. (Foote, 1994) This requirement added to the documentation and paperwork burden of the PM.

d. House Committee on Appropriations Report for 1992

Although committee reports do not carry the force of law, agencies usually comply with the recommendations, since ignoring such direction could place future funding in jeopardy. This recommendation from the House Committee was for DoD to form a single organization for all chemical destruction activities. The PM's office was reorganized to include the non-stockpile program and renamed the United States Army Chemical Materiel Destruction Agency. (Livingston, 1992) This change brought together the resources of both the stockpile and non-stockpile programs and provided a single manager with oversight of all the chemical weapon destruction programs.

e. National Defense Authorization Act for 1993

With the enactment of the National Defense Authorization Act for 1993, Congress again extended the chemical weapons stockpile elimination deadline to December 31, 2004, to conform with treaty and diplomatic obligations. Congress also reacted to local opposition to on-site incineration by requiring the Army to submit a report on potential

alternative technologies to the baseline process selected for destruction of the stockpile. PL No. 102-484, § 173(B) states:

> ...the Secretary of the Army may not commence site preparation for, or construction of, a facility for disassembly and incineration of chemical agents until the report required under subsection (a) is submitted to Congress.

It also required that the Army establish a Chemical Demilitarization Citizen's Advisory Commission for any state in which there is a chemical munitions storage site. The purpose of the Commission is to receive citizen and state concerns regarding the chemical demilitarization program. (Foote, 1994) Again, program delays and solicitation schedule changes were experienced until compliance with the requirement of the law was accomplished.

f. Department of Defense Appropriations Act for FY 1994

The FY 1994 Appropriations Act contained language that prohibits the expenditure of funds for studies on the feasibility of removing and transporting unitary chemical weapons from any of the eight CONUS stockpile sites. It also prohibits studies on potential future uses of the nine chemical demilitarization facilities and extends the prohibition on shipping chemical munitions to JACADS. Congress did provide that future uses of the CAMDS facility at TEAD could be explored. (Foote, 1994)

C. ACQUISITION STRATEGIES

1. Acquisition Strategy for Facility Construction: 1984 thru 1991

Eight major contracts summarized in Table 3 were awarded between 1984 and 1991. The contract types were Cost-Plus-Fixed Fee (CPFF) or Cost-Plus-Award Fee (CPAF). In addition to the contracts set forth in Table 3, a Program and Integration Support Contract

(PAISC) was awarded in March 1991. The PAISC is a contract to provide technical and management support services to the PM to ensure program integration of all phases and areas of the CSDP. This is a task order engineering services contract with ordering provisions for CPFF and firm-fixed price (FFP) task orders. (AMCCOM, 1992)

Substantial cost growth over projections has been experienced in all the contracts, except the training facilities contract. Cost growth has been attributed to construction problems and delays experienced in the demilitarization systems contracts at Johnston Atoll and TEAD, contractor coordination problems, delays in receipt of EPA permits, and delays in award of planned facility contracts at the remaining seven CONUS sites. (AMCCOM, 1992)

PURPOSE	TYPE	REMARKS
Design & Systems Integration	CPFF	A&E contract for design of the eight CONUS demilitarizatiion facilities
JACAD Construction	CPFF	Construction at Johnston Atoll
JACAD Systemization	CPFF	Equipment Installation at Johnston Atoll
JACAD Operation	CPFF	Facility Operation at Johnston Atoll
Training Facility	CPAF	Construction of Training Facility at APG
Process Equipment Contracts (2) (This equipment will be GFE for the Facility contracts)	CPFF	Design and Production of the special process equipment for JACADS and CONUS sites.
TEAD Facility	CPAF	Total package contract for construction, systemization, and operation.

Table 3. Contracts in support of the CSDP as of October 1995 (AMCCOM, 1992)

The Assistant Secretary of the Army for Installations, Logistics, and Environment stated, "The JACADS contracting process clearly proved to be both cumbersome and inefficient." (Livingstone, 1992) There were continuing disagreements over the points where responsibilities started and ended, and contractor coordination and cooperation were difficult, placing the program's objectives in jeopardy. (AMCCOM, 1992) This was attributed to having three separate contractors for the construction, systemization, and operation phases of the JACADS. In addition there were two contracts for the chemical processing and emission abatement equipment to be furnished as Government furnished property (GFE) to the construction and systemization contractors for installation and testing.

As a result of this experience, the Army decided to use the total systems contract approach at TEAD to alleviate the problems encountered with JACADS. The TEAD facility contract was for construction, systemization, operations, and close down. The contractor was required to furnish commercially available equipment; however, the specialized process and emissions abatement equipment remained as GFE.

Even with the total systems contracting change, the GAO predicted that design changes, EPA requirements for test burns, funding shortfalls, and schedule delays would impact the costs incurred under the TEAD contract. (GAO, 1990) Almost immediately it became apparent that the project cost estimate was inadequate. Items that were not cost factors for JACADS, such as the amount of reinforced steel needed to meet seismic zone 3 and explosive/vapor proof requirements, surfaced and new requirements, such as a building to handle containers, were identified. (Livingstone, 1992)

By September 1991, the construction cost growth on the TEAD disposal facility had increased from $49.6 million to $180 million. Construction stoppages occurred until additional funds could be appropriated. (Livingstone, 1992) Delays caused the forecast for demilitarization operations to be slipped to the Fall of 1995. Because of the problems encountered in contract performance at the JACADS and TEAD facilities, the ASAILE, in 1992, undertook initiatives to improve management structure and control program cost growth. The next section discusses the management changes initiated by the ASAILE, and the contracting strategy planned for the remaining facility contracts.

2. Management Change Initiatives: 1992 through 1995

The multiple schedule delays and cost increases caused Congressional concern about the management attention being provided for the CSDP. The life-cycle-cost estimate for the

Program Life-Cycle Cost Estimate (LCCE) Summary
(dollars in millions)

Appropriation/ Budget Activity	Funding FY 1993	Funding FY 1995	LCCE FY 1993	LCCE FY 1995
Research and Development	$ 7	$ 20.7	$ 57	$ 267
Procurement	245	199.0	2,162	2,766
Operations and Maintenance	262	355.8	5,069	6,739
Military Construction	15	24.0	1,243	1,317
Total	$ 529	$599.5	$ 8,531	$11,089

Table 4. Program Life-Cycle Cost Summary

program increased from $1.7 billion in 1988 to $11.1 billion in 1995. The Army's Cost and Economic Analysis Center expects the estimate to increase. Table 4 reflects the comparison of the program's FY 1993 and the FY 1995 funding and the projected life cycle cost estimate (LCCE) summary as of the end of each respective fiscal year. The Army attributed the cost growth to unanticipated program requirements, higher costs for materials and technical and programmatic delays. Schedule slippage was attributed to initial unrealistic milestone schedules and subsequent management decisions to meet the schedules mandated by public law. In October 1991, the ASARDA authorized the ASAILE to participate in the CSDP programmatic acquisition functions and designated it as the CSDP decision authority. In January 1992, the ASAILE directed that the CSDP be managed as an Army acquisition program under the purview of a modified Army Systems Acquisition Review Council (ASARC) process. The ASARC is the milestone decision and program review board for nominated Army programs that are not designated as major defense acquisition programs. The ASARC process for program milestone reviews contains many elements of the Defense Acquisition Board (DAB) process. The modified ASARC procedures for the CSDP included the following:

- Tailored list of participants.
- Streamlined reporting structure.
- Reduced documentation requirements.
- Vice Chief of Staff of the Army joint approval on milestone documents.
- The Deputy Under Secretary of Army for Operations and Research would have approval authority for the Test and Evaluation Master Plan.
- ASAILE would approve program documents including
    - Acquisition Strategy Report.
    - Mission-Need Statement.
    - Operational Requirements Document.
    - Integrated Program Summary.

- Budget Cost Estimate.
- Acquisition Program Baseline Agreement.
- All Program Plans as required.

Three types of ASARC reviews were adopted by the ASAILE for the CSDP: (1) decision reviews to approve major program milestones, (2) program reviews to fully assess program status, and (3) special reviews conducted as needed. (DoD IG, 1994)

Between August 1993 and February 1994, the DoD Inspector General (IG) performed an audit of the CSDP that recommended the program be elevated to DAB review status. The IG pointed out that the program costs had exceeded the threshold for designation as a major defense acquisition program (MDAP) and the level of congressional and public interest justified a more disciplined program management process. After review of the program, the Under Secretary of Defense for Acquisition and Technology (US(A&T)) designed the CSDP a Major Defense Acquisition Category (ACAT) 1D Program subject to the DAB executive reviews. (DoD IG, 1995) At that time the MDA reverted to the ASARDA with the PMCD reporting directly to the ASAILE.

When the decision was made to subject the program to ASARC reviews the PMCD's charter was revised to clarify the PM's responsibilities and authority. The charter revision clearly delineated thresholds for senior level decision review of cost, schedule, and technical performance parameters. In conjunction with this initiative the PMCD office was reorganized to enhance overall management of the program. To ensure appropriate coordination and accountability, field-level management changes were made to focus responsibility for all site-specific activities on one individual. (Livingstone, 1992)

Site-specific Configuration Control Boards were established to improve management of change orders. This action was designed to clarify individual and cumulative approval thresholds, assign responsibility for approval authority at each level, and ensure timely communication of change order impacts on life-cycle costs and schedules. (Livingstone, 1992)

On February 6, 1992, the program's Head of the Contracting Activity (HCA) including legal and procurement support authority was transferred from the Army COE to the Army Materiel Command (AMC). The U.S. Army AMCCOM, now designed as the U.S. Army Industrial Operations Command (IOC), was designated the AMC procuring office. The IOC procuring contracting officer (PCO) will remain the PCO for the life of the contracts. The administrative contracting officer (ACO) will be located at the Huntsville Division of the COE for the construction phase through equipment installation. This eliminated the procedure established by the COE for transferring the PCO responsibility during execution of the projects and provides one contracting coordination point for contractual issues. In addition to transferring the contracting authority for the CSDP, the ASAILE directed that all active contracts for the program be evaluated for future transfer to AMC. The purpose was to provide one face to industry for the PCO functions and legal support of the program. (Livingstone, 1992)

The following section will discuss the management changes since 1992 to enhance program oversight and increase the coordination between activities involved in the program. It will also discuss how lessons from previous experiences are incorporated into the decision

making process and the changes made in the CSDP contracting strategy during the last five years.

3. Revised Contracting Strategy: 1992 through 1995

The contracting strategy for the JACADS contracts was heavily influenced by the Competition in Contracting Act and the traditional way the COE contracted for design and construction projects. Five full and open competition solicitations were issued, one for each phase of the project. The resulting five contracts to three different contractors proved to be an administration nightmare as the ASAILE indicated in testimony to Congress. The total package contracting strategy for the Tooele disposal facility took into consideration the lessons learned during the JACADS experience. However, as indicated above, even with using the single systems contract approach, the GAO's prediction of schedule delays and cost growth became reality. The GAO's prediction was partially based on the fact that the TEAD contract was awarded prior to design completion (60 percent complete) to meet the milestone mandated by PL 100-456, requiring stockpile destruction to be completed by April 30, 1997. In 1992, ASAILE directed that no future request for proposals (RFP) would be released if the design of the facility was incomplete. The ASAILE also directed that a FFP for the construction and equipment installation phases of the system contract would be pursued. (Livingstone, 1992)

As a result of the above directions, the contracting strategy for the CONUS facilities was amended. The revised strategy provided for each remaining systems RFP to require proposals be submitted in a format that separately priced each of the phases as follows:

- Process and Support Facility Construction.
- Equipment Installation.
- Preparation of Site-Specific Systems Operations and Maintenance Manuals.
- Plant Startup.
- Test and Acceptance.
- Plant operations and Maintenance.
- Closure of the Site.

Project management was to be set forth as a separately priced element, and was to span the effort from award to contract completion. (AMCCOM, 1992)

The Acquisition Strategy document approved by the PDA requires that the remaining systems contracts will be CPAF contracts with the line items for construction and equipment installation being priced on a FFP basis. There is a caveat that provides that design must be sufficiently complete to support the use of fixed pricing for construction and equipment installation. There continue to be significant unknowns regarding the systemization and operations phases of the program, and a cost-reimbursement arrangement is expected to be used for these phases. Incentive fee arrangements are to be considered as more experience in full-scale demilitarization operations is gained. (Livingstone, 1992)

Additional changes to be incorporated in future solicitations and the resulting contracts include: (1) reduction in the amount of Government Furnished Eequipment (GFE) to be furnished, (2) a specific cost proposal format to facilitate the formal source selection process, (3) a restructured award fee plan, (4) a requirement to meet DoD standards of

Cost/Schedule Control System Criteria and to report project compliance via a Cost Performance Report, and (5) a two-month extension to the construction schedule in which the contractor will be required to prepare a fully loaded network analysis schedule and construction plan. (AMCCOM, 1992) The construction extension of two months is also to be used for establishing a "partnering" relationship with the Government officials administering the contract to facilitate communications and cooperation for the duration of the project. (Livingstone, 1992) Solicitations will continue to be issued under the full and open competition procedures.

The Army has actively applied the lessons learned from the JACADS and TEAD facility contracting efforts to mitigate the forecast of continued cost growth and delays in the CSDP. There remain significant issues that will require attention and astute management solutions to ensure program success and destruction of the unitary chemical weapon stockpile by the end of calendar year 2004. Some potential issues include contracting delays due to budget reductions, EPA permit delays due to lack of resources and pressure from public interest groups, indemnification problems due to in-plant accidental release of toxic chemicals, unforeseen maintenance for facilities, continued program cost increases due to delays and increased program requirements, accelerated deterioration of the stored chemicals, and natural disasters that may cause accidental release of toxic chemicals into the atmosphere. Impacts to the program may also be caused by the recent acquisition reform initiatives.

D. SUMMARY

The unitary chemical weapon destruction program has evolved from the need to eliminate obsolete and dangerous material in the United States weapons arsenal. The

Congress recognizes the urgency surrounding the program as indicated by mandated deadlines to complete the destruction process. The CWC further emphasizes the international interest in bringing such warfare methods under control for the general welfare of the world's population. The very nature of the weapons and the awesome damage that could result from the accidental release of their toxic chemicals causes concern from all levels of the public sector. Public interest from both short- and long- term health and environmental concerns are issues that must be addressed and resolved.

In concert with the Congress and public interests the Army has developed a management and acquisition strategy that has advanced the program through design, development, and the low-rate initial destruction phases. Facility and equipment design and testing parameters have been meticulously developed to meet health, safety, and environmental criteria as well as some of the public concern in these areas.

The CSDP progressed to the critical phase of full-scale destruction of deadly toxic weapons. The PM is now in the process of making contract awards for the construction of the CONUS destruction facilities to eliminate the stockpile. The design of these facilities and the equipment to be installed has been based on years of prototype development, testing, public scrutiny, and EPA permit requirements. The PM must now step back and apply the acquisition reform initiatives on specifications and standards to the CSDP.

The next chapter will provide a background of acquisition reform initiatives. The acquisition reform initiative background will be followed by a discussion of efforts directed toward the June 1994 DoD policy on specifications and standards when acquiring goods and

services for the military. Last the Army implementation plan for the DoD specifications and standards reform effort is provided.

III. ACQUISITION REFORM INITIATIVES

Numerous attempts have been made to reform the Federal Government acquisition system. The Dockery Commission of 1893 was established to look at Federal administrative activities including contracting. The Dockery Commission report included a finding of widespread duplication of contracting functions and a failure to use standardized specifications in Federal purchasing. The recommendations from the 1905 Keep Commission and the Taft Commission on Economy and Efficiency of 1912 also urged reform of the Federal acquisition system. (Pegnato, 1995) The following section examines some of the major Federal acquisition reform and streamlining recommendations.

A. MAJOR ACQUISITION REFORM INITIATIVES

The first major statute regulating the procurement process was, "The Armed Forces Procurement Act of 1947." This Act generated the Armed Services Procurement Regulation, which was approximately 125 pages long. Since 1947 many Congressional commissions, such as the Hoover Commission (1955), Fitzhugh Commission (1970), Commission on Government Procurement (1972), Grace Commission (1983), and Packard Commission (1986) have made major recommendations for reform and change to the acquisition procedures. (Fox, 1988) More recently there has been the Defense Management Review Report (1989), the Defense Science Board Task Force on Defense Acquisition Reform (1993), and the Acquisition Law Advisory Panel (1993) also known at the "Section 800 Panel." (Foreman, 1994) Each of these efforts recommended use of commercial practices as a method to increase quality and reduce acquisition costs. Use of commercial practices has

been interpreted to include items such as: the adoption of commercial business processes, the elimination of nonvalue-added oversight and controls, and the use of commercial specifications and standards in lieu of rigorous military design specifications.

In 1984, Congress passed the Competition in Contracting Act (CICA) which changed many of the aspects of how the contracting process worked. One of the basic provisions of CICA is that specifications must be sufficiently definitive so as to permit competition on a common basis. CICA and the Federal Acquisition Regulation (FAR) implementing CICA require that specifications be developed in such a manner as is necessary to obtain full and open competition. The policy set forth at FAR 10.002 (b) states:

> Acquisition policies and procedures shall require descriptions of agency requirements, whenever practicable to be stated in terms of functions to be performed or performance required.

There are several reasons that requiring activities continue to use defense-unique specifications and standards. Many specification developers for the DoD interpreted the policy that agencies specify their needs in a manner designed to promote full and open competition as the need to use military specifications and standards. It was felt that the use of these defense unique specifications and standards ensured that offerors were submitting proposals on the same item. If each offeror is permitted to define the specifications for itself as may be the case with performance or functional specifications, to the extent that offerors do so differently, they are not competing on an equal basis. (Doke, 1995)

By use of the defense prepared military specifications and standards, it was perceived that protection was provided to the Government in the event of a protest based on interpretation of the requirement. Personnel that develop requirements for the Government's

supplies and services realize that performance specifications leave to the contractor the responsibility of choosing the means, methods, and techniques for accomplishing the contract work. Often these requiring activities feel strongly about the methods and techniques that are to be used in the production of goods and services of which they are the ultimate users. Safety and logistical considerations often cause use of military specifications and standards in an effort to reduce the risks of the receipt of nonconforming supplies. Additionally, the conversion of specifications into performance or functional statements of requirements is difficult and there is little or no training available in this area. (Doke, 1995)

The above circumstances are a few of the reasons that attempts to restrict the practice of using established military specifications and standards have not been successful in the past acquisition reform efforts. It must also be recognized that parochial interests have also played a role in delaying the timely execution of conversion from military specifications and standards to commercial equivalents.

The most recent reform effort was initiated by Congress in Section 800 of the National Defense Authorization Act for FY 1991, P.L. 101-510. This report was delivered to the Congress in the spring of 1992 and was the first initiative in developing a DoD position on recommendations for legislative change for the acquisition system. Using the guidelines provided by Vice President Gore's National Performance Review and the recommendations of the Advisory Panel on Streamlining and Codifying Acquisition Laws (Section 800 Panel), the Defense Science Board, numerous commissions, and experts within DoD, Secretary of Defense Perry developed the DoD vision of a re-engineered acquisition system. (Perry, 1994)

The following section will discuss the DoD policy on specifications and standards as set forth in Secretary Perry's white paper entitled "Acquisition Reform, A Mandate for Change," the DoD Process Action Team (PAT) report entitled "Blueprint for Change," and Secretary Perry's memorandum entitled "A New Way of Doing Business." Finally, a discussion of the Army's implementation plan for the DoD's specification and standards policy will be provided.

B. DOD POLICY CHANGE BACKGROUND

In February 1994, Secretary of Defense Perry published a white paper that discussed dramatic changes in the DoD acquisition processes in order to meet military security challenges of the United States and to reduce acquisition costs. The paper states that the problem with the DoD's acquisition system is a complex web of laws, regulations, and policies, adopted for laudable reasons over many years. One of the examples provided was as follows:

> Military specifications were adopted to ensure DoD got a quality product that would meet the user's needs while using a procurement process that would allow it to buy from the lowest bidder; and to ensure standardization to enable ease of logistics support....(Perry, February 1994)

Perry characterized the DoD acquisition system as an "industrial era bureaucracy in an information age." (Perry, February 1994) One of the philosophies still being adhered to is use of detailed design and how-to specifications as the only way to ensure an acceptable product, and to ensure a level playing field for competition. To reengineer the acquisition system the Secretary of Defense identified focus areas for concentrated efforts in the near term. One of those focus areas was the DoD acquisition process or more specifically, how

we identify what we buy. The Deputy Under Secretary of Defense for Acquisition Reform (DUSD(AR)) was appointed as the focal point for the development and implementation of a coherent and practical step-by-step plan. The implementation plan for the DoD reform process targeted certain segments of the acquisition system that promised to yield immediate and substantial improvements. One of those focus areas was the issue of defense-unique product and process specifications and standards. (Perry, February 1994)

1. Specifications and Standards Process Action Team

The DUSD(AR) chartered a PAT to address the defense-unique specifications and standards issue. The PAT tasking was to analyze why Federal Government specifications and standards were continuing to be preferred despite the three-year-old DoD policy preference for commercial standards. The team was chartered to develop a plan to implement a preference for commercial and performance standards unless a military specification is the only practical alternative. (Perry, February, 1994)

The team acknowledged that it was unlikely that a time would come when all defense needs could be satisfied with commercial specifications and processes. The PAT also conceded that there were no universal solutions or overnight panaceas that would enable the conversion of the military specifications and standards program into a commercially amicable system. A fundamental problem identified at the beginning of the review process was that military specifications and standards are written and applied inappropriately and not tailored to the specific procurement situation. Either of two major problems may develop when this occurs: (1) the technology described is obsolete or, (2) the amount of how-to direction prevents exploration of other ways of achieving the desired result. The goal of the PAT

became to maximize the overlap between DoD needs and commercial capabilities. (Process Action Team, 1994)

Six priority areas were identified by the PAT to focus the reform effort. The areas identified were as follows:

- Performance-Based Specifications.
- Eliminating Excessive Contract Requirements.
- Overhauling the Standards Process.
- Integrating New Management Tools.
- Increased Training and Education.
- Leadership Commitment.

The PAT recommendations in each of these areas were published in the team's report in April 1994. The report of the PAT included projected milestones expected to complete the recommended actions and projections for funding that would be needed to accomplish the recommendations. (Process Action Team, 1994) The recommendations of the PAT were endorsed by the Secretary of Defense in a memorandum addressed to the Military Departments, the Joint Chiefs of Staff, and others on June 29, 1994. The memorandum is attached at Appendix D. This memorandum represents the most forceful policy statement to be issued by DoD in the area of specification and standards reform. It not only dictated multiple and critical policy changes, but directed the reprogramming of funds for FY94 and FY95 to begin implementation of the recommendations. The Secretaries of the Military Departments and the Directors of the Defense Agencies were also directed to program funding for FY96 and beyond to support the efforts required to accomplish conversion efforts in the out years. (Perry, June 1994) The directions provided in the Perry memorandum and the potential funding impact of the program are discussed in the following paragraphs.

2. DoD Policy on Specifications and Standards

The most significant policy change in the Secretary of Defense memorandum was the direction that performance specifications shall be used when purchasing new systems, major modifications, upgrades to current systems, and nondevelopmental and commercial items, for programs in any acquisition category. Military specifications and standards are to be authorized only as a last resort and require a waiver approved by the MDA, or in the case of ACAT ID programs, the waiver must be granted by the Component Acquisition Executive (CAE). Secretary Perry then directed that the Defense Federal Acquisition Regulation Supplement (DFARS) include language encouraging contractors to propose non-Government standards and industry-wide practices. He encouraged the Military Departments and Directors of the Defense Agencies to exercise existing authority to insert language as proposed by the PAT in solicitations and current contracts. The memorandum also advised PMs that military specifications and standards listed in the DoD Instruction 5000.2 should be viewed as for guidance only. The Secretary also directed that military specifications and standards below the first-tier references in the equipment/product specifications were to be considered as guidance only. (Perry, June 1994)

Five new directions were set forth as action items in the memorandum. Those initiatives are as follows:

1. Management and Manufacturing Specifications and Standards: The US(AT) develop a plan for canceling, inactivating, transferring to non-Government standards, converting to performance based specifications, or justifying their retention.

2. Configuration Control: The Government maintain control of the functional and performance requirements only. Make contractors responsible for the detailed design.

3. Obsolete Requirements: The US(AT) develop a procedure for identifying and removing obsolete requirements from the DoD Index of Specifications and Standards and the Acquisition Management System and Data Requirements Control List.

4. Partnerships: Encouraged US(AT) to form partnerships with industry associations to develop non-Government standards for replacement of military standards where practicable.

5. Reduction of Oversight: Reduce direct Government oversight by substituting process controls and non-Government standards in place of development and/or production testing and inspection to include military-unique quality assurance systems. (Perry, June 1994)

The PAT understood that the magnitude of this change would require altering the fundamental way that PMs, requiring activities, users, and contracting offices viewed requirements definition. Collectively the changes prescribed constitute a dramatic cultural change. The Secretary of Defense recognized the need to address cultural changes in his memorandum by setting forth the following directions to the acquisition community.

1. Challenge Requirements: Acquisition decision makers at all level are expected to challenge requirements as the problem is rooted in the requirements determination phase of the acquisition cycle.

2. Reduce/Eliminate Toxic Pollutants: Establish department and agency programs to identify and reduce or eliminate toxic pollutants procured or generated through the use of specifications and standards.

3. Training and Education: US(AT) shall ensure that training and education programs are revised to include specifications and standards reform.

4. Milestone Reviews: MDAs will review programs at all levels to ensure that streamlining both in the contract and in the oversight process is being pursued.

5. Appoint Standards Improvement Executives (SIE): Departments and Agencies shall appoint SIEs to support those carrying out acquisition reform, direct implementation of specification and standards reform program, and participate on the Defense Standards Improvement Council.

Finally, the Secretary encouraged management commitment in establishing the environment essential for implementing the cultural changes needed for implementation and execution of a successful program. Strong leadership would be required at all levels of the Military Departments and Defense Agencies to accomplish the vision set forth in the PAT report. (Perry, June 1994)

The funding impacts identified and projected by the PAT beginning in FY94 and extending through FY99 are set forth in Table 5 entitled "Cost Summary of PAT Recommendations." (Process Action Team, 1994) Offsetting cost savings were not projected

	FY94	FY95	FY96	FY97	FY98	FY99	TOTAL
Standards Program	50.9	48.2	45.8	43.5	41.2	39.1	268.7
Training & Education	4.0	3.5	1.4	1.4	1.4	1.4	13.1
Automation							
Preparation & Maint	8.3	12.2	10.0	7.7	6.1	5.0	49.3
Application	2.1	5.8	6.8	5.8	5.5	5.1	31.2
Pollution Prevention	1.6	21.1	16.5	16.5	16.5	0	72.2
National Standards	1.9	2.0	.7	.7	.7	0	6.0
Convert Mfg & Mgmt							
Specs and Stds	2.6	7.7	5.9	0	0	0	16.2
Obsolete Specifications	2.0	1.0	.1	.1	.1	0	3.3
TOTAL	73.4	101.5	87.2	75.7	71.5	50.6	459.9

Table 5. Cost Summary of PAT Recommendations (In Millions of Dollars)

by the PAT although the PAT acknowledged that lower acquisition costs should be realized after implementation of the team's recommendations.

On December 6, 1995, the Secretary of Defense (Perry, December 1995) issued a memorandum, see Appendix E, that encouraged contractors to propose non-Government specifications and industry-wide standards to replace Government-unique requirements on current contracts. The memorandum authorized the ACO to use block changes to the management and manufacturing requirements within a facility when such changes would be technically acceptable to the Government. The purpose of the memorandum was to put into place a method to expedite the transition of existing contracts to use of commercial specifications and standards thus promoting uniform, efficient facility-wide management and manufacturing systems. (Perry, 1995)

C. ARMY IMPLEMENTATION PLAN

The Army Implementation Plan (AIP) for achieving the DoD PAT recommendations was issued in November 1994. It outlined specific actions to be taken and established policy tailored to the Army acquisition community. Unless clarification or specific instruction was required, the AIP avoided duplication of the PAT's analysis, recommendations, action agendas, and impact and risk assessments. The AIP stressed the two main aspects of the military specifications and standards reform effort, (1) the use of military specifications and standards and (2) the replacing or revision of military specifications and standards. (AIP, 1994)

Each Army Acquisition Organization (AAO) was required to establish its own approach and document its method to accomplish the required reforms in its own Master

Action Plan (MAP). The AIP identified the waiver authority for other than new ACAT programs as the AAO Commander, Director, or the Program Executive Officer (PEO). The waiver criteria were set out in detail although the AIP specifically advised that the AAO and the PEO should tailor internal processes to match their actual procurement environment and to accomplish the goals of streamlining the acquisition process. MAP preparation and approval criteria were established in the AIP to ensure that approval authorities were at a sufficiently high level to provide the AAOs with incentives to establish an aggressive action plan. The AAO plans were required to be reviewed by the activities SIE and submitted to the ASARDA by February 1, 1995. (AIP, 1994)

The Army set a goal to review and cancel or convert the maximum number of Army used military specifications and standards by July 1, 1996. Each MAP must list the number of AAO prepared/owned military specifications and standards and a comprehensive plan to reduce or eliminate those specifications and standards. The MAP is to prioritize efforts by targeting high pay-off areas based upon available resources and provide milestones for plan accomplishment.

The Army implementation of the performance specification preference was expanded to apply the PAT recommendation to all solicitations which included rebuys of ACAT systems, non-ACAT programs, procurement of services, replenishments, and spares. The deadline by which all solicitations must comply or be granted waivers in accordance with the prescribed procedure was set for December 23, 1994. (AIP, 1994) The management and manufacturing specifications and standards recommendation made by the PAT was the second area of stringent implementation by the AIP. The Army's guidance requires that statements

of work (SOW) be performance-based and specify only what functional work the contractor is to accomplish, not how the work is to be done. The guidance prescribes the use of the Army's Functional Support Templates to streamline SOWs and requires that a Functional Requirements Authentication Board (FRAB) be established to validate that the Templates have been applied and that SOWs are integrated and performance-based, and to ensure that the SOW uses performance specifications. (AIP, 1994)

The AMC Pamphlet dated March 24, 1995, contains the Functional Support Templates prescribed by the AIP. The templates were developed to assist PEOs, PMs, and Commanders to determine the minimum essential functional matrix support needed for the management of acquisition programs. The intent of the templates was to stimulate thought about specific functional requirements and to question proposed solutions to those requirements. In particular, they encourage review of those requirements for functional support and those that add contract costs but result in little or no value added to the acquisition program. The templates are to be used at the earliest stages of an acquisition program to assist in identifying alternative approaches to the traditional methods used to specify requirements. By using the templates, requiring activities are forced to focus on alternatives that result in reduced oversight, inspections, and cost. (AMC, 1995) The AMC has developed the templates as a result of the Army "Road Show" efforts to scrub solicitations and requirement documents. At this time there is an initiative by the DoD Acquisition Reform Under Secretary to promulgate the templates into a DoD document for use by all Services in efforts to streamline the acquisition process. (Moore, 1995)

D. SUMMARY

In this chapter a number of initiatives for reform and streamlining of the Federal acquisition process were reviewed. This review culminated in the explanation of the most recent policy direction by the Secretary of Defense to move the procurement system away from use of unique Government specifications to commercial standards and performance specifications. The Army implementation plan for the DoD policy was defined along with discussion of the AMC preference for performance specifications as demonstrated by its use of functional support templates for solicitation reviews.

The following chapter will address the process to accomplish the conversion to non-government unique specifications or standards and performance specifications.

IV. CSDP SPECIFICATION REFORM

The CSDP is unique in that it is not a weapon systems production program, but a weapon systems destruction program. Congress has mandated a destruction schedule that takes into consideration the proposed Chemical Weapons Convention (CWC) that is before it awaiting ratification. Time schedules are critical for the purpose of abiding by the terms of the CWC and because of the deteriorating condition of the weapon containers. The safety of personnel operating the facilities, adjacent workforce, and residents of the immediate area is critical. The safety factor could cause major delays due to unforeseen natural hazardous conditions, mechanical failure, human error, and pressure from special interest groups such as Greenpeace, Common Cause, and the Sierra Club. Environmental compliance issues will provide an avenue of continuing cause of delay as it is critical that all aspects of the planned disposal methods be thoroughly reviewed prior to issuance of necessary permits. Public interest must be addressed and the process of keeping the public informed is time consuming, and if not delivered appropriately, can have an adverse effect on the issuance of approvals to proceed with contract performance. The inability to project program costs more accurately has contributed to congressional concern. If schedules are lengthened, it is likely that costs of the CSDP will grow and may escalate by at least the amount of inflation that occurs over the period of time that schedule slippage is experienced.

Acquisition reform initiatives must now be factored into the equation by the CSDP planners. The conversion of military specifications and standards to commercial equivalent or performance specifications must be considered in the schedule milestones for solicitation

issuance and contract award. Delays in these areas could ultimately cause the weapons destruction schedules to be compromised. With any potential schedule delay there is a high probability of associated cost increases. Resources will be expended to determine the scope of the effort, for the review of current documents, for the conversion of current military specifications and standards to performance specifications, and for the processing of waivers if applicable.

The following section will provide a prospective on the effort involved in conversion of military specifications and standards to comply with the acquisition reform initiative on preference for performance or commercial specifications. The specification conversion process section will be followed by sections that discuss the potential effects on schedules and cost to accomplish the conversion and provide some insight on how the conversion process may affect EPA approvals and certification requirements. The final section of this chapter will address the influences that the conversion may have on the contractual instruments for the CSDP and how contractor performance will be evaluated.

A. THE SPECIFICATION CONVERSION PROCESS

The responses to the interview survey questions and telephonic interviews with personnel from the contracting, COE, PM, HQAMC, HQDA, and DoD offices indicate there are a minimum of three and potentially as many as six levels of review of the procurement documents for the CSDP program. The COE is the primary review office for the construction phase of the program. The PM's office has the overall responsibility to ensure that all the documents provided to the contracting office have been examined for compliance with DoD policy. The contracting office then performs a solicitation "scrub" to identify any remaining

specifications that would be potential candidates for conversion to commercial or performance. In addition to these reviews the AMC headquarters policy and compliance review teams may perform a review for compliance with the AIP and apply the templates to the proposed solicitation documents. The Overarching Integrated Process Action Team (OIPT) for the CSDP may also address areas contained in the solicitation that need to be considered for changes during their assessment conducted prior to the DAB program reviews. The DAB can also recommend and direct changes to the program documents as a result of their program reviews. The following sections will discuss the review process at each level.

1. The Army Corps of Engineers Review Process

The Huntsville Corps of Engineers District office was the procuring contracting office until February 1992, when the program contracting was consolidated at the IOC. As a result they are fully familiar with the construction design package prepared by Parsons, the Architect and Engineering contractor for the CSDP facility. The COE has also been the ACO responsible for overseeing the construction at Johnston Atoll and Tooele. The Huntsville office will continue to be designated as the ACO for all future planned construction contracts for this program. (Loehrl, 1996)

In the COE specification review process, the facility design factors are taken into consideration. Any changes to the facility design package requires coordination with Parson, the PM office, and COE internal quality and engineering staffs before any recommendation for conversion to commercial or performance specifications can be finalized. The factor of safety of operations would be the primary concern. Emission elevation risks would need to

be applied, and the EPA permitting authorities would be involved if there was a possibility that current standards may be compromised. (COE Survey, 1996)

The chemical destruction facility design package was completed prior to the specification policy change. As this is a construction contract and safety is the primary concern of the program, COE efforts to review the design package have been minimal. Service and construction contracts are the lowest priority for compliance review under DoD policy since service contracts normally use performance-oriented specifications, and construction contracts tend to use commercial standards. Personnel in the Huntsville office advised that construction design is primarily based on commercial practices, therefore the actual construction should not require many unique Government or military specifications. The equipment to be installed and the emission levels are the critical areas for concentration of the design review. Their current procurement package review process utilizes a constructability team concept that includes members from all technical and engineering areas that have an interest in the requirement. Each team member reviews the proposed solicitation construction requirement to ensure that all relevant interfaces are addressed, that the technology level is available or will be available to perform the construction required, and that appropriate performance parameters are included . (COE Interview, 1996)

2. The Program Manager Review Process

In early 1994 the PM's acquisition office formed a team to examine all solicitations with the intent to make as many changes to commercial and performance specifications as possible. All technical and engineering offices involved in the CSDP were represented either as a member of the team or were asked to coordinate on team recommendations. Team

members included representatives from the COE and the IOC. About 750 hours were spent on the initial scrub of solicitations being prepared for issuance. This review did not include the construction design package. As a result of the review, all but one military specification that was called out in the solicitation were converted to performance. The one military specification retained was the demilitarization training specification. The program had invested over $40 million in the training process and there were critical environmental and safety risks that could result if proper operating procedures were not followed. The PM requested and obtained a waiver from the MDA to retain the training specification in the solicitation. The PM believes that significant benefits will accrue to the program from use of performance specifications. (Bushman, 1996)

Monthly reviews are conducted of the equipment designated for the facilities. About one sixth of the total GFE requirements are targeted for these monthly reviews. In this way the entire list is reviewed every six months. These reviews include the equipment design component as well as the operating contractors and are focused on commercializing the equipment at the facilities. Extensive coordination includes the equipment designer to make sure that critical environmental and safety considerations are addressed, the EPA to ensure RCRA permits will not be affected, and the contracting office in conjunction with the operating contractor for the conversion modification. To further this effort to commercialize the GFE, offerors on active solicitations are encouraged to provide alternate recommendations in their proposals. In addition to the equipment changes, another outcome of these ongoing monthly efforts has been that several contract data requirements list (CDRL)

items have been eliminated. In one instance the contractor processes were adopted for the maintenance management plan in lieu of using a military specified process. (Bushman, 1996)

In addition to the above ongoing reviews, the PM office formed a CSDP Concept Review Team (CCRT) in September 1995 to examine methods for achieving significant cost reductions in the stockpile disposal effort. This integrated process team (IPT) was not constrained in examination of alternatives with the one exception that all laws governing demilitarization must be fully met. One of the initiatives of the CCRT is to make recommendations for changes to increase the use of performance specifications, with an emphasis on the systemization, closure, and support elements of the current contracts and solicitations. (PM-CSD, 1995)

3. The Contracting Office Review Process

The contracting office at the IOC is asked to coordinate the PM and COE review efforts and to provide recommendations regarding the potential affect of changes on contract cost and performance. In addition to these coordination requirements, the contracting office performs RFP scrubs. These scrubs are performed at the IOC Headquarters and include representatives from the COE, PM, and the installation where the facility is to be constructed. The IOC functional areas including legal and procurement policy analysts also participate. There are normally two meetings that last two to three days each. The purpose of the initial meeting is to go through the RFP page by page as a group and try to reach consensus on the recommendations for changes. Each specification call-out is identified and then checked against a listing of exempted specifications. The specification is then reviewed to determine

if it can be converted to a performance specification or if an equivalent commercial specification exists.

After the initial meeting, the solicitation is revised and distributed to the individual members. After allowing time for individual review, a second meeting is held for the purpose of incorporation of comments and finalization of the revised document. If any contentious issues remain after this meeting, another meeting may be required to resolve the disagreements. The purpose of the scrub is to identify areas that, not only could be converted to performance or commercial specifications, but requirements that should be considered for deletion or revision to eliminate redundancy. The scrubs are designed to ensure that only needed requirements are included in the solicitation. At the time of the scrub, the AMC templates are applied to ensure all pertinent questions are asked and each requirement has a valid need to be included. These scrubs do not include the construction technical data as that is the domain of the COE. (Loehrl, 1996)

Solicitation Review Boards are held just prior to the release of the RFP to comply with the regulatory requirement of formal solicitation reviews. A draft RFP was used for the ANAD requirement, however that practice was not used for the PBA, PUDA, or UMDA RFPs. The solicitations have become more standardized with each solicitation that is released. The first solicitations did not allow alternate proposals due to the critical safety parameters. Although these critical safety parameters have not been relaxed, the PM determined that alternate proposals could be considered if they were within the performance requirements. By allowing alternate proposals, contractors can now make recommendations for conversions to commercial or performance specifications. The solicitations that are now

under evaluation, PBA and UMDA, and the PUDA solicitation issued in early February 1996, allow and encourage alternate proposals. The ANAD solicitation was issued in 1992, well before the DoD policy memorandum providing direction on commercial and performance specifications. (Loehrl, 1996)

4. Other Levels in the Review Process

The AMC periodically requests solicitations for review prior to issuance for proposals. Usually the AMC selects solicitations for major weapon systems. Although the CSDP is an ACAT ID program, it is considered to be a construction, services program and the headquarters has not requested any of the program's solicitations at this date. However, the headquarters always has the authority to request a review if it is deemed appropriate. At this time with significant oversight being provided from other sources, personnel at the AMC feel an added review would be redundant. They are also satisfied that the PM and contracting office are applying the templates as prescribed by AMC policy, as the IOC has obtained the Army training in this area. The headquarters AMC does review any requests for waivers to use other than performance or commercial specifications and makes recommendations to the MDA regarding approval. (Moore, 1995)

The offices of the ASARDA and the ASAILE analyze and comment on all documentation prior to DAB reviews. Both offices participate in the OIPT meetings prior to DAB in-process-reviews. During their assessment, they ensure that appropriate actions have been taken to convert military unique specifications to commercial or performance requirements. Ultimately, the DAB queries any requirements that are not in compliance with

the DoD specification policy and ensures that appropriate waivers have been obtained. (Oscar, 1995)

B. CONVERSION PROCESS AFFECT ON SCHEDULES AND COST

Telephone interviews were conducted in conjunction with responses to the interview survey questions to collect the data for this section. Responses were received from the IOC contracting office, the Huntsville Division of the Army COE Chemical Demilitarization Directorate, and the CSDP PM office. These offices are the primary organizations that would expend effort in the specification reviews as indicated in the previous section. This section will discussion the resources used and schedule impacts by each of these primary offices to comply with the DoD specification and standards policy.

1. Corps of Engineers Cost and Schedule Impact

The Huntsville office of the COE has estimated that to perform the review required by the DoD policy, specifically aimed at identifying and listing the military unique specifications in the design package, would cost about $250,000 per solicitation based on an estimated 3,000 hours of effort. This effort could take from three to six months depending on the extent of coordination requirements and whether the EPA is required to coordinate due to a potential change to a specification that has been cited in the RCRA permit (COE Survey, 1996). In addition to the design package review, the constructability team, referred to in the section above, would continuously monitor new and on-going requirements for the program to ensure compliance with the DoD specification policy. This team usually consists of about 15 members and the overall effort requires about a 1.5 resource year effort. The members review each construction package individually and may have a number of formal meetings

prior to reaching full agreement and finalization of the procurement documents. (COE Interview, 1996)

The COE survey indicated that there should be no schedule impact on the CSDP due to their reviews. The constructability review is included in the contracting milestones for each solicitation. Review for compliance with the DoD specification policy should not require a longer period of time than is currently used for these reviews. The COE does not plan to expend anymore effort than the estimated 3,000 hours of initial effort on the Parson's design package (COE Survey, 1996). One Huntsville Division COE source indicated that it is doubtful that the design package will require changes for future solicitations. This source advised that most construction specifications are already commercial or performance-oriented. The area that would be most likely to call out military specifications would be the special demilitarization equipment to be installed in the facility. The specification of this equipment is the responsibility of the PM, thus it is highly unlikely that the equipment reviews would impact COE schedules. (COE Interview, 1996)

2. Program Management Office Cost and Schedule Impact

After the DoD policy was issued in June of 1994, the PM office formed a team to review all the current solicitations for the CSDP. About 750 hours were expended in this review to convert as many specifications as possible to performance. All specifications that did not comply with the DoD policy, with the exception of the one training specification referred to in the preceding section, were converted to performance. It is estimated that approximately 100 hours each month is used on a continuing basis to ferret out any "how to"

language found in solicitations and current contracts. Then efforts are made to convert that language to performance-oriented wording. (Bushman, 1996)

It is estimated that an additional 400 to 500 hours a month is spent in the ongoing acquisition strategy reviews in the PM office. The acquisition strategy effort is aimed toward reduction of CDRL requirements or converting those requirements to commercial format. The strategy review is also looking at the maintenance management plan for the facilities. These reviews are to ensure that commercial specifications are maximized and to identify any areas that may have been overly specified due to the safety and environmental concerns. (Bushman, 1996)

The other major effort within the PM office is the review of the equipment specifications. The equipment for each site costs about $100 million. About 75 percent of that equipment was unique military specified GFE designed specifically for the CSDP. Currently the efforts to identify alternate commercially available equipment have resulted in a decrease of GFE to about 60 percent of the total equipment needed to be procured for each facility. That means that an estimated $15 million worth of additional equipment is now being bought using competitive solicitations. To convert one piece of equipment that is called out as GFE to contractor procured commercial equipment can take up to six months of effort. (Bushman, 1996)

The survey from the PM office indicated that they had not experienced any delays in the program schedule due to the DoD specification policy. Other program delays, most of which were caused by the EPA permits process, had allowed more than sufficient time to complete their initial reviews. The ongoing reviews will not cause delays in the current

contracts as the equipment for the Johnston Atoll and Tooele contracts is already procured. The changes in the solicitation requirements from GFE to CFE has not been a cause of delay in receipt of proposals or contract awards as of this date.

3. Contracting Office Cost and Schedule Impact

According to the PCO at the IOC, the contracting office has expended very little effort over and above its normal solicitation scrubs and solicitation review boards due to the DoD specification policy. RFP shrubs have always questioned requirements that were not stated in terms of performance. Application of the AMC templates is expressly for the purpose of elimination of redundant and excess requirements that only serve to increase cost and add no value. The contracting office provided a representative to the PM's office during their initial review of solicitations to comply with the June 1994 policy guidance. However, the contracting officer considered that support to be minimal and was probably included in the estimate the PM had provided for the cost of that review. The contracting office has not kept records on the time expended in the specification review process. The office is completely dedicated to and resourced by the CSDP PM, therefor, all effort in that division is expended toward that program. (Loehrl, 1996)

The contracting office could not attribute any of the solicitation issuance, source selection board, or contract award delays to the review for conversion of specifications to commercial or performance specifications. Changes to the solicitations were of such magnitude that any specification change that was included in these amendments would not have in and of themselves been cause for the time extensions granted due to the changes. Any GFE to CFE changes that occurred during the source selection process were included in the

discussion and negotiation phase of the process, thus allowing the proposers to address those changes in their best and final offers. For the most part, delays have been experienced for reasons other than solicitation changes. The most significant delay factor has been obtaining the necessary RCRA permits to allow award. Most of these delays have been driven by political pressures brought to bear by environmental groups and congressional constituents in the locale where facilities are purposed for construction. (Loehrl, 1996)

The CSDP schedule provided in the program acquisition strategy of February 1992 for the eight CONUS demilitarization facilities is compared to the revised program schedule as of February 1996 in Figure 3. Each schedule bar depicts the three major phases of the contract. The first phase is construction of the demilitarization facility. The second major phase is systemization of the facility, including installation of equipment to perform demilitarization and testing of equipment. The third phase is demilitarization operations during which the lethal chemicals are destroyed. The close down phase will add approximately three months to each schedule. (AMCCOM, 1992; PMCD, 1996)

C. AFFECTS ON EPA APPROVAL AND CERTIFICATION

Information provided by answers to the survey questions and interviews indicate concern in this area. Most responses were framed in the context of the delays that could occur in receiving permits to proceed with the work under the contracts. The comments provided for this question are discussed in the following paragraphs.

The COE survey response indicates that the EPA will be involved in the specification conversion process when the conversion to performance or commercial specifications affect the basis for which the RCRA permit was issued. If the permit was issued based on a military

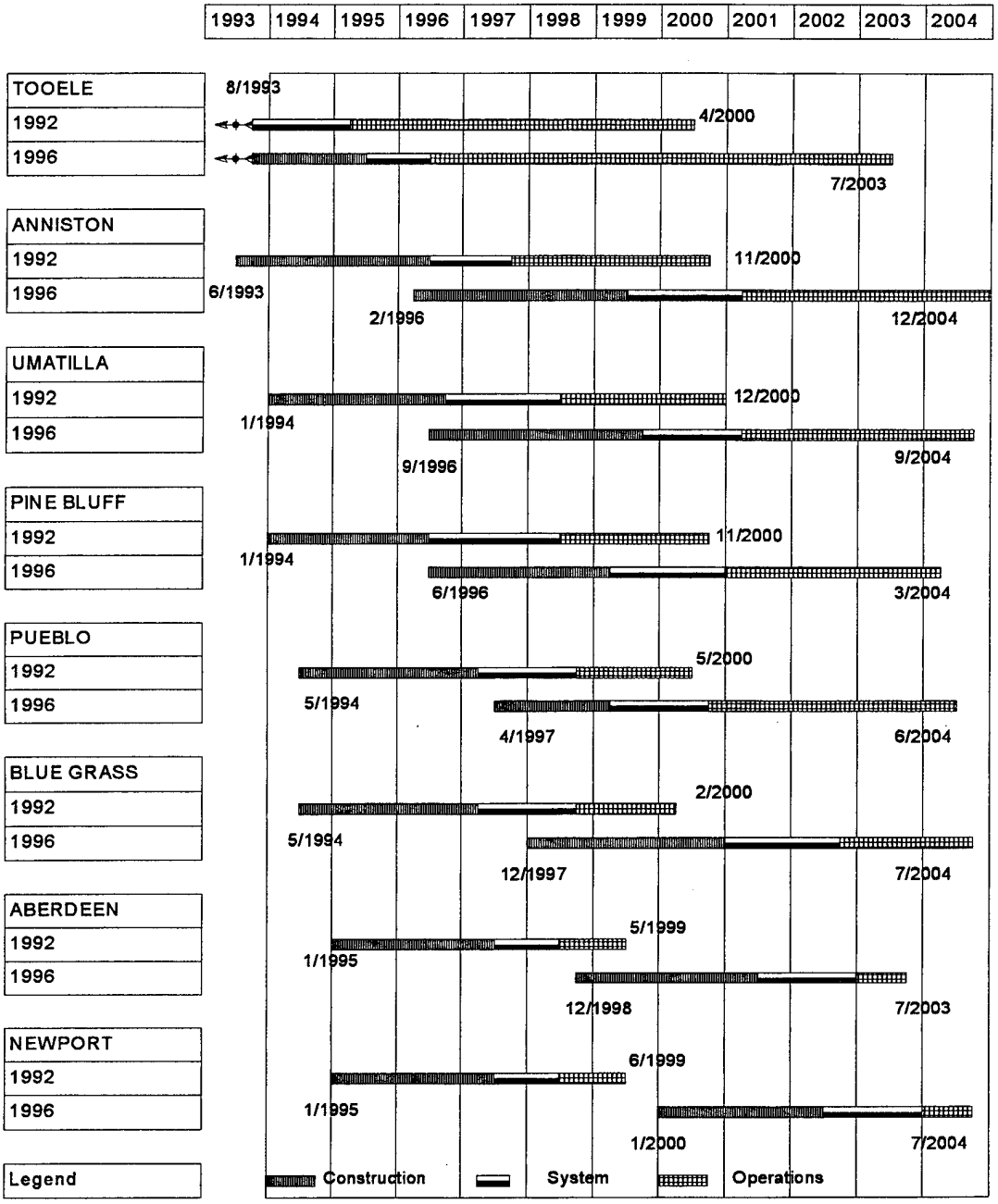


Figure 3. CSDP Contract Schedules (AMCCOM, 1992; PMCD, 1996)

specification or standard that was included because of specific results from the CAMDS or JACADS operational testing, our quest to change that specification could cause additional permitting delays. The quality assurance area was specified as the area of greatest concern,

although it was not anticipated that the EPA would require any additional testing. One of the goals of the COE is to screen the specification conversions to ensure that program risk would not increase or the risk to any one party to the contract did not change as a result of conversions. (COE Survey, 1996)

The contracting officer felt that there would be significant impact to the program if EPA is asked to change the basis for the RCRA permits. Current permits were issued based on demonstrated performance at the JACADS facility. The public has been assured that the Army is operating and will continue to operate at the safety levels established and maintained at the test facilities. If the Government should now convert specifications that have proven to produce a specified level of safety, this may be construed by the public that the Army cannot be relied upon to keep its word that all facilities would be built and operated in the same manner. The public watch groups can be relied upon to make the EPA aware of these concerns and could bring pressure on the EPA. There is a great deal of uncertainty involved in what may happen in the public area. Public forums must be heard and if their confidence is eroded the program will be impacted. The degree of impact is difficult to predict. (Loehrl, 1996)

From the PM office representative's perspective, it was not felt that the conversion to performance and commercial specifications would delay the EPA permitting process. However, the representative acknowledged that it was unlikely that the public interest groups general opposition to the use of the incineration method to dispose of the lethal chemicals contained in the weapons being destroyed would change. When any conversion is contemplated by the PM office, the EPA permit requirements are reviewed to ensure that no

quality or safety level is altered that would lower the levels of performance on which the permits were based. The operating contractor is required to sign the RCRA permit with the Government. The representative from the PM office felt that a contractor may be more willing to co-sign the permit where the contractor had more inputs into the equipment and processes to be used. (Bushman, 1996)

The interview with Amy Smithson (1996) of the Henry J. Stimson Center echoed the concerns of the contracting officer. Ms. Smithson advised that the public interest groups were ever watchful of the performance of the contractors in this program and would see any changes in the processes as a threat to their understanding of what had been promised to be performed. The internal and external releases of chemical agent at the JACADS facility has eroded their confidence that the program can be performed safely using the incineration process. Although, the Army has made some strides in its public relations efforts, it is important that continued efforts are made to communicate the program objectives, provide rebuttals to claims and accusations, comply with emission standards, and maintain destruction schedules at Tooele. If changes to the program specifications are made without making that know to the public, it is likely that program delays will continue due to inability to obtain required EPA permits. (Smithson, 1996)

D. CONTRACTOR PERFORMANCE MEASURE AND CONTRACT TYPE

The final area covered by the survey and interviews was issues regarding the possible affect on contract type and contractor performance measurers due to conversion of current requirements to performance specifications. The COE did not provide any input in this area, nor did AMC, DA, or DoD, although they were in agreement that the general process used

to review the specifications for conversion candidates and the use of the AMC templates to scrub requirements was having an overall effect of improving the quality of the solicitations being issued.

The Army SIE, Dr. Kenneth Oscar (1995), stated that as the Army changes to performance specifications it can obtain the latest technology and this will allow the modernization of systems and processes. The SIE also believed that the process of reviews and scrubs was causing organizations to move away from the traditional functional way of doing things. It was forcing the structure to change to use of integrated product teams and focusing on performance outcomes desired in lieu of prescribing the product in minute detail. Anecdotal evidence provided by Dr. Oscar indicates that savings in the area of $25 million will be reaped as a result of switching to a single soldering process at Raytheon. This represents a significant amount to already constrained defense budgets. Properly executed, there is reason to believe that other programs can benefit from the conversion to commercial and performance specifications. (Oscar, 1995)

The CSDP PM office representative predicted that the move toward use of performance specifications would allow more fixed- price arrangements in the contracts being awarded for the program. Indications are that future contractor performance evaluation plans can be based more on the outcomes of the contractor's activities and not measured as much by the old quality assurance standards that have been used in the past. In lieu of monitoring and measuring each individual task in the process, the ultimate result from the process would be considered during the award fee evaluation. This has a subsidiary benefit to the ACO of the ability to utilize staff members more effectively. (Bushman, 1996)

The contracting officer believed that changing to performance specifications should allow the Government to go to completion type contracts. Presently the contracts are term type contracts. Current solicitations contemplate contracts that are fixed-price for the construction phase and cost for systemization and operations. Use of performance specifications may allow movement to fixed-price-incentive type arrangement for some of the other phases. The contracting officer would like to have the ability to tell the contractor.... "here is the plant and equipment:...you (the contractor) complete munitions destruction by '**X**' date." (Loehrl, 1996)

As the PM drives toward more completion type incentive contracts for the systemization, operations, and close-down phases due to changes to commercial and performance specifications, the contracting office predicts there will be increased emphasis on cost and schedule. The contracting office is concerned that one of the dangers of this shift in balance is that it may decrease the emphasis on environment and safety. As more "how to" is eliminated and more "performance" is introduced, there is a commensurate amount of discretion left to the contractor. This increase in risk is hard to quantify and must be offset during the source selection process by ensuring choice of a good contractor. The offsetting benefit to use of performance specifications is that it allows the responses to the solicitations to use newer and more technologically advanced ways of proposing how they will accomplish the requirements. This will give the source selection board the opportunity to evaluate proposals on a "best value" basis. (Loehrl, 1996)

The current contracts in place at JACADS and Tooele have performance evaluation plans in place that require performance monitors from the ACO office to oversee the daily

operations and collect data on how the contractor performed a specific task. The requirements currently in solicitation, source selection, and negotiation stages will have performance evaluation plan factors that will look at what the outcomes of the contractor's performance was in lieu of how the contractor performed the task. As more of the contractual phases are converted to completion type, fixed-price arrangements, the contracting officer sees that more emphasis will be based on end result performance when the award fee board establishes the criteria for award of incentive or award fees. (Loehrl, 1996)

E. SUMMARY

In this chapter the results of the survey and information obtained during personal interviews were set forth for each of the subsidiary areas of research. The processes used by each of the primary offices involved in conversion of solicitation requirements from unique military specifications to performance and commercial specifications was discussed. These offices had initial reviews to comply with the DoD specification policy when it was issued and have adopted continuing review processes to garner added benefits from the conversions to commercial and performance specification.

In the second section of the chapter, the information received from the primary review offices on cost and schedule impacts resulting from the specification review efforts was discussed. Possible affects to the program's EPA permitting requirements and potential program delays that may result when the current specifications are converted to performance specifications was discussed in the third section. There is divergent opinion concerning the EPA permitting arena. Opinion ranges from little to much concern regarding the relationship

between the conversion of specifications and the potential for EPA involvement due to the RCRA permit process.

The final section of this chapter discussed how the various offices concerned with the CSDP believe that contract type and contractor performance evaluation measurement may change as a result of the specification conversion efforts. The following chapter will provide an analysis of the information collected from the survey and personal interviews recorded in this chapter.

V. ANALYSIS

Information gathered through review of the available literature and interview of individuals involved in the CSDP and acquisition reform was recorded in the previous chapter. Most of the interviews included personnel opinion and anecdotal evidence on the areas of relevant concern as well as factual information on the processes and known impacts to the chemical demilitarization program. Many of the information sources interviewed qualified their remarks by indicating that it was too early in the conversion process to evaluate the full program impact and potential savings that may be ultimately realized from conversion of military-unique specifications and standards to commercial or performance specifications. This chapter will set forth an analysis of the information obtained. Each subsidiary research question will be addressed in the order presented in the first chapter of this thesis.

A. CRITICAL ISSUES ASSOCIATED WITH THE CSDP

Subsidiary question one asks, "What is the nature and extent of the CSDP and what are the critical issues associated with it?" The nature and extent of the CSDP as portrayed by the available literature, papers, and reports on the program are discussed in Chapter II of this thesis. The information obtained from the literature and the interviews indicate that the major issue of the CSDP could be stated as a program objective. That objective could be communicated as follows. ***To safely dispose of stockpiled deteriorating unitary chemical weapons within programmed life cycle cost by December 31, 2004.***

Issues that could be considered ancillary to the CSDP program objective as stated above are those of the mechanics involved in attaining that objective. A review of the

information obtained during the research of this question indicates that the critical issues associated with attaining the program objective are (1) obtaining the required EPA permits to construct and operate the chemical demilitarization facilities, (2) containing the cost of the program, and (3) completing the demilitarization within the mandated time. These three issues have formed the basis for the critical program decisions and are interrelated. Delay in receipt of permits and complying with unforeseen EPA requirements has caused cost growth and endangered program completion schedules.

Another important issue that influences issuance of the EPA permits is the Army's selection of baseline incineration as the disposal technology. This issue was referred to in several interviews. The author of this thesis chose not to include the controversy over the alternate technology issue as it is arguably unrelated to the military-unique specification and standards reform efforts. The baseline incineration process was developed by the Army at the CAMDS facility in Utah. Facility design is based on this process and baseline incineration is identified in the solicitations as the only acceptable technology for the disposal process. At this point the decision has been not to question whether the baseline incineration process should be considered a military-unique specification and the questions surrounding the issue of alternate technologies are considered to be outside the scope of this thesis.

B. THE CONVERSION PROCESS

The second subsidiary question asks, "What are the activities necessary to convert current specifications to predominantly performance specifications?" The responses from the activities responsible for preparation of the solicitation requirements, issuance and evaluation of the solicitations, and oversight of the contracting process indicate that several processes

are being used to convert military-unique specifications to commercial or performance specifications. The critical reviews for specification conversion candidates are performed by the COE, the CSDP PM, and the IOC contracting offices. Analysis of the processes used by these offices show that although each office described its process differently, they all used a logic flow methodology in their review of acquisition requirement packages. The requirements package review process used by these offices can be diagramed in a decision tree format as set forth in Figure 4.

The decision tree begins with the identification of a military specification or standard in the requirements documents that will become a part of a solicitation. The list of those military specifications and standards that are exempt from the conversion policy requirement is then consulted. If the referenced specification or standard is on the list, then the need for the referenced specification or standard is questioned. If there is not a valid need for the referenced document, it should be deleted; if there is a valid need for the specification or standard, it remains with no further action. If the military specification or standard is not on the exempt list, the document must be screened to determine if it contains performance requirements that pertain to the CSDP. If the answer is no, then the question of critical lessons learned must be asked. If the document contains critical lessons learned for the CSDP then it should be referenced as a guideline. If it does not contain critical lessons learned it can be deleted. If the identified specification or standard contains requirements that pertain to the CSDP then the questions "Can it be stated in the SOW?", "Does an equivalent commercial specification or standard exist?", and "Can a performance specification be developed?" must be addressed. If all these questions are answered no, a waiver would be required.

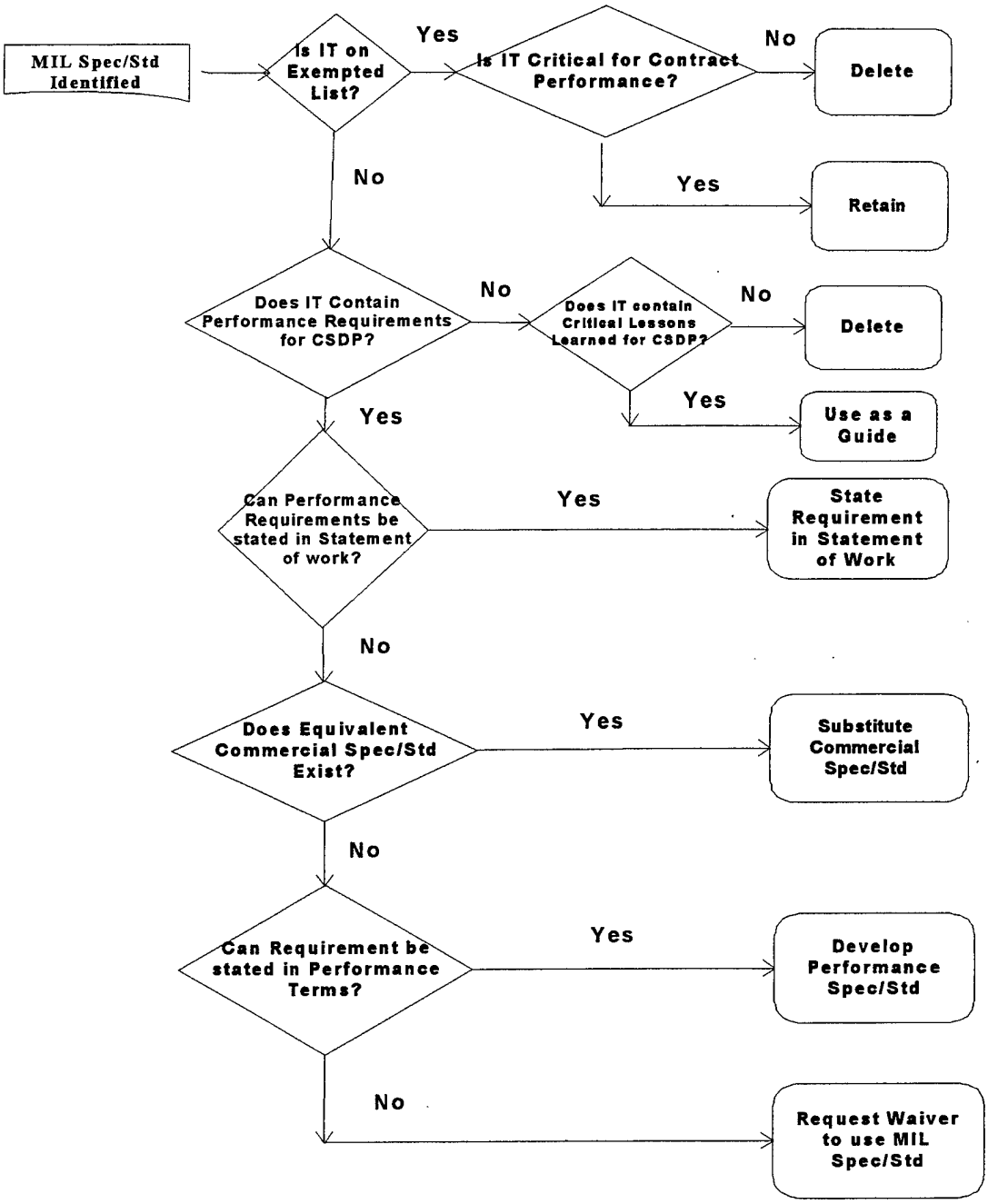


Figure 4. Specification/Standard (Spec/Std) Review Decision Tree

1. Corps of Engineers Review Process

The COE's primary responsibility is providing the facility design construction package to be included in the solicitation for each of the site's total package contracts. The COE acknowledged that they had not conducted a review of the chemical destruction facility design package and it would be unlikely to do so. The evidence contained in the interviews indicate that there are four reasons for not performing a review of the facility design package. The fundamental rationale for not conducting a review is the fact that construction packages primarily use performance specifications and commercial standards. Another reason for bypassing the review was that the facility design package had been contracted and completed prior to the current specification and standard reform effort. A third reason is that review is precluded due to the safety considerations. The Parson facility design contract has configuration control requirements in place to ensure that all facilities are constructed alike to comply with current mandates. If there are any changes to the baseline design, an engineering change proposal must be prepared and processed to ensure that no safety parameters are jeopardized. The final reason for not performing the design package review appears to be that resources required to perform the review have not been made available.

Although the COE is not involved in a dedicated design package review, the interviews and surveys reveal that the Huntsville COE office has in place a mechanism to accomplish an in-depth review of CSDP procurement requirement packages. The interview responses describe a constructibility team of experts. This team of technical, engineering, and functional area experts do, in fact, perform reviews of CSDP procurement requirement packages using the logic flow as indicated in Figure 4.

2. Program Manager's Review Process

The program office for the CSDP has primary responsible for the specification and standard review of all the requirement documents with the exception of the construction design package. As was noted above, the COE has responsibility for construction design. The PM's office has used several mechanisms to perform reviews of procurement package requirements. These mechanisms have included both temporary and permanent organizational structures to address the acquisition reform initiative for specification reform. A temporary team was established to address the Secretary of Defense memorandum dated June 29, 1994. A permanent team has been established to conduct monthly reviews of certain portions of the contractual requirements. Finally, a temporary IPT was formed for the purpose of examining methods for achieving cost reductions, a portion of which includes further reviews of contractual requirements including specifications and standards.

All of the endeavors by the PM's office to address the DoD specification and standards acquisition reform initiative have been addressed by use of the technical and functional expert team concept. The teams are composed of resources from the PM's office and other relevant organizations including external organizations to the DoD. Offices within the DoD but external to the PM office that are routinely asked to participate on the PM's specifications and standards review teams include the IOC contracting office and the Huntsville COE office. During the review process the applicable contractor may become involved in the coordination process to the extent that information is needed on safety, health, cost, and schedule considerations that require evaluation prior to finalizing a recommendation. External coordination with the EPA becomes necessary when permit requirements may be

impacted by a change to the current requirement on which a RCRA permit may be based. The Federal Emergency Management Agency and the Occupational Safety and Health Agency may also become involved if any recommended changes to specifications and standards would affect the safety and health standards currently established by the programs awarded contracts. The decision tree process set forth at Figure 4 is the logic used by the CSDP PM's teams to execute the decision making support documentation and determine what recommendation will be made to the final decision authority. The review team(s) coordination requirements may be illustrated by the network diagram at Figure 5.

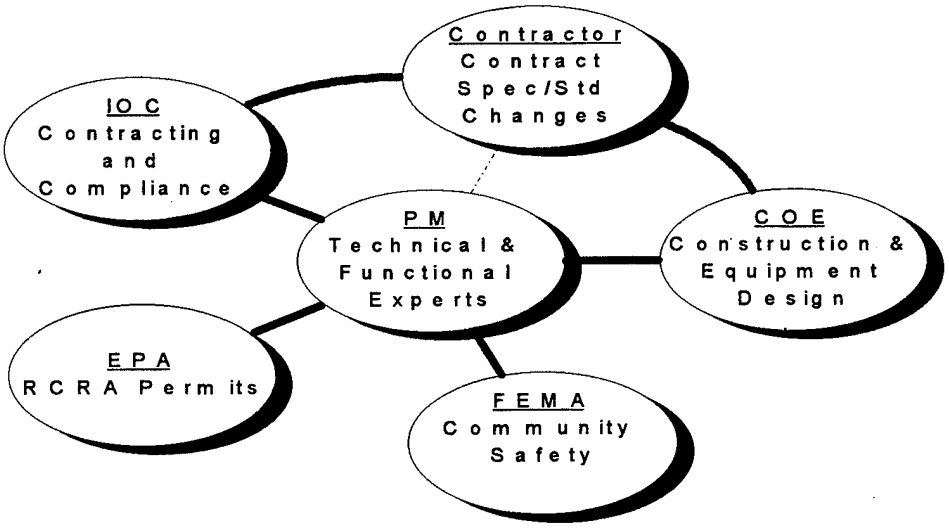


Figure 5. Specification Review Team Coordination Network

3. Contracting Office's Review Process

The IOC contracting office has adapted its solicitation review processes to include a review for military-unique specifications and standards. There are two major reviews performed during the solicitation preparation cycle at the contracting office that include

military-unique specifications and standards. These reviews are the RFP scrub, when the AMC templates are applied, and the solicitation review board to obtain the necessary clearance to issue the solicitation.

The RFP scrub and the solicitation review board are reviews directed by the internal contracting procedures for the subordinate buying activities under the AMC. The purpose of these reviews is to eliminate any unnecessary requirement that does not provide value to the supplies and services being procured or does not provide critical information to enable the effective and efficient administration and oversight of the contractual arrangement. The RFP scrub is not limited to seeking out any reference to military specifications and standards, but includes a complete review of the four corners of the solicitation and a questioning of any requirement that appears to be excessive or superfluous to the instant procurement. The PM and the COE is invited to participate in RFP scrubs as they must ultimately coordinate on any recommended changes to requirement documents including the SOW and CDRL.

The solicitation review board is concerned with ensuring that the document proposed for issuance is legally sufficient and that all the required legal and regulatory approvals, determinations and finds, or other required documentation has been received and in the pre-award file. This review represents the final opportunity to identify any military specification or standard that was not identified and addressed in previous reviews prior to the solicitation being issued. Requiring activities are normally invited to participate in these reviews to answer any board members' questions relating to the requirement documents.

The contracting office may become involved in additional military specification and standard reviews after the solicitation is issued. Additional reviews are encouraged by

including an invitation in the solicitations and contracts for the potential and the actual contractors to recommend alternative specifications and standards to those called out in the RFP or contract. If an alternate proposal is received during the evaluation phase it can be coordinated and negotiated during the source selection and negotiation process. If an alternate suggestion for use of commercial or performance specifications is received after contract award, the proposal could be treated as a value engineering change proposal, coordinated in accordance with those procedures, negotiated, and incorporated into the contract by a modification.

It is apparent that the contracting office is using a logic decision tree process as is set forth at Figure 4 for specification and standard reviews relating to solicitation requirements. For any change proposals received after solicitation and prior to award, the source selection and negotiation process would be the vehicle used for coordination and accomplishing the change. After contract award, contractor submitted specification and standard change requests will likely take the form of value engineering change proposals and be processed through that established procedure.

4. Other Levels of Review Process

In any pre-solicitation review, when major changes in specifications or standards are made that could have critical effects on the program risks (i.e., cost, schedule, and/or performance) or constitutes a change in the approved program acquisition strategy , the MDA may need to approve the change and the solicitation release. The AMC, ASARDA, and the DAB may become involved in changes recommended by reviews involving conversion of military specifications and standards to performance or commercial specifications. The funds

already invested in the training facility at Aberdeen Proving Grounds were the basis for the recommendation for the MDA to approve a waiver for the training specification. It is unlikely that the levels of review above the IOC contracting office and the CSDP PM office will use the decision tree approach in their reviews of this program's requirements. Although it should be anticipated that any in-process review of the CSDP at the HQDA and DoD level may question whether the DoD memorandum on specifications and standards has been considered and complied with during preparation of the solicitation documents.

If changes in specifications and standards are proposed by contractors after award of the contract, it is unlikely that the headquarters activities of the Army or DoD will become involved. Approval actions at the MDA level are only required if a non-exempt military specification or standard is being proposed for use in a solicitation.

Therefore, it is appropriate that there was no indication at these levels that a disciplined review process, such as the process illustrated by Figure 4, is used for specification and standard reviews or that such reviews are even needed. The ACAT ID program review process is sufficient to ensure that the DoD policy on maximization of performance and commercial specifications is considered and implemented by the PM and contracting office.

The ensuing section will provide an analysis of the potential schedule and cost impacts due to conversions to use of performance and commercial specification for the CSDP.

C. SCHEDULE AND COST IMPACT ANALYSIS

The question, "What is the affect on schedules and cost to accomplish this conversion process?" is asked by the third subsidiary question. This section will first provide an analysis of the information received regarding schedule impacts. Then an examination of the costs

reported as of January 1996 and projected costs of potential future reviews to convert remaining military specifications and standards to commercial or performance specifications will be supplied.

1. Schedule Impact

None of the primary review offices, Huntsville COE, CSDP PM, or IOC contracting, were able to attribute any schedule delays to the reviews conducted to convert military specifications and standards to commercial or performance specifications. When the DoD memorandum was issued in June 1994, the Tooele facility total package contract had been awarded and the Anniston facility solicitation had been issued. The Anniston facility solicitation was issued in April 1992. At the time of the DoD memorandum on specifications and standards, the Anniston RFP was still open with a projected award date of October 1994. None of the remaining solicitations for demilitarization facilities were scheduled or ready for issuance in June 1994. The military specifications and standards review was required only for the procurement requirements to be issued with new solicitations.

The PM's office solicitation requirements review resulting from the June 1994 DoD memorandum included all procurement packages that were being prepared for RFPs. After experiencing numerous extensions to the closing date for the Anniston facility solicitation, due to EPA permit delays, the PM requested that the contracting officer issue amendments to that RFP to accomplish military specification and standard conversions. As a result of this decision, it is likely that there will be some savings accrue to the program due to the conversion to performance and commercial specifications as early in the process as possible. From the information received regarding schedule impacts, the changes to the RFP to convert

military specifications and standards to performance or commercial specifications were not the underlying reason for delay of award of the Anniston facility total package contract. The award was made on February 29, 1996, with a limited authority to proceed due to lack of an EPA permit that would allow construction to begin. That permit is expected in June 1996.

As is indicated by the above discussion, there is little evidence to associate the CSDP schedule delays with the acquisition reform direction to convert military specifications and standards to commercial or performance specifications. Although individual solicitation amendments incorporating specification and standard changes may have extended the closing date for the Anniston RFP, the EPA permitting process was the overriding delaying factor in the ultimate award date of the contract. Review of the CSDP schedule at Figure 3 indicates that if continued program schedule slippages are experienced due to EPA permitting delays, completion of disposal by the mandated date is at risk.

2. Cost Impact

The PM, COE, and IOC offices incurred cost because of the acquisition reform initiative to maximize usage of commercial and performance specifications. The IOC contracting office cost for the initial military specification and standard review, chaired by the PM office, was included in the estimate provided by the PM's representative. The contracting office's standing operation procedures require performance of the RFP scrub to apply the AMC templates and the solicitation review prior to issuing the RFP. As these reviews would have been performed whether or not the review to eliminate unneeded military specifications and standards was performed, those costs were not estimated or attributed to the cost impact of this acquisition reform. This section will discuss the estimated cost impact to the PM and

the COE offices as well as the potential savings that may be expected as a result of conversion to commercial and performance specifications.

Data were not available from any of the offices on the specific personnel, grade levels, or functional areas represented by the review teams. Several assumptions were necessary to perform the analysis of personnel cost. First, it was assumed that multiple function areas would need to be represented with a mix of grade levels commensurate with the level of expertise required to perform the necessary analysis. An average grade level of General Schedule (GS) 12, step 5 was used by the researcher based on the professional level of skill required to make the recommendations set forth in the decision tree portrayed at Figure 4. An 18 percent benefit level was assumed based on the recommendation of an Army salary and compensation budget analyst at an AMC subordinate activity. The annual compensation amount was assumed to be based on 2,087 hours for a full-time equivalent employee. Using these assumptions to estimate personnel cost for full-time equivalent employees, Tables 6 and 7 were constructed for use in this analysis. Table 6 displays the GS compensation for the Huntsville, Washington D.C./Baltimore, Rest of the U.S. and Base Pay (without locality pay adjustment) as of January 1994 for grade level 12, step 5 full-time equivalent employees. Table 7 displays the GS-12, step 5 compensation for the same geographical areas as of January 1995. The four regional categories in the tables represent the geographic locations of the offices involved in the reviews with the base pay region which pertains to all geographical areas for which GS compensation is utilized. The base pay category indicates the basis of compensation without locality pay adjustments. The rates of compensation for 1994 and 1995 were calculated by using the pay rates and the locality percentage increases

Region	*Annual Salary*	*Hourly Rate*	*Benefits 18%*	*Adjusted Rate*
Base Pay	$45,670	$21.88	$3.94	$25.82
Huntsville	47,542	22.78	4.10	26.88
Rest of the U.S.	47,081	22.56	4.06	26.62
Washington/Baltimore	47,602	22.81	4.11	26.92

Table 6. GS-12/5 Compensation Rates as of January 1994 (Mace & Yoder, 1995)

Region	*Annual Salary*	*Hourly Rate*	*Benefits 18%*	*Adjusted Rate*
Base Pay	$46,584	$22.32	$4.02	$26.34
Huntsville	48,629	23.30	4.19	27.49
Rest of the U.S.	48,326	23.16	4.17	27.33
Washington/Baltimore	49,137	23.54	4.24	27.78

Table 7. GS/5 Compensation Rates as of January 1995 (Mace & Yoder, 1995)

for GS employees published in the *Federal Employees Almanac, 1995 Edition.* The percentage that salaries increased for Huntsville, Rest of the U.S., and Washington/Baltimore were as indicated in Table 8. Rates reflected in the adjusted rate column represents the amount that will be used to calculate the estimated costs of performing the necessary reviews

Region	*1994*	*1995*
Huntsville	4.10	2.28
Rest of the U.S.	3.09	2.64
Washington/Baltimore	4.23	3.22

Table 8. Yearly Salary Increases in Percent (Mace & Yoder, 1995)

and related tasks to convert military specifications and standards to commercial or performance specifications.

The Huntsville COE estimated the cost to review one solicitation's construction design package to be about $250,000. The exact breakdown of the categories of costs included in that number was not made available to the researcher. The one available statistic was that approximately 3,000 hours of personnel resources would be expended to perform the review. Using Tables 6 and 7 the cost of human resources would equate to $80,640 ($26.88 X 3,000) if the review was performed in 1994 and $82,470 ($27.49 X 3,000) if performed in 1995. The Tooele and Anniston solicitation had been issued when the DoD directive was issued. Therefore there will be no costs incurred for those solicitations. The Umatilla solicitation was issued on July 8, 1994, prior to receipt by the contracting office of the June 29, 1994, Secretary of Defense memorandum. As this solicitation had been issued prior to receipt of the DoD policy statement, no review of the design specification was performed for the purpose of identifying or converting military specifications and standards in the design package to commercial or performance specifications. The Pine Bluff solicitation was issued prior to the 180 day period allowed for waiver of the implementation of the changes directed by the DoD memorandum. No design review on the facility design was performed prior to issuance of the Pine Bluff solicitation. As of January 1996, the COE has not performed a presolicitation design review of the CSDP requirements.

There are four solicitations remaining to be issued for demilitarization facilities. Design requirements reviews for those solicitation packages will be required unless a waiver is granted by the MDA or the DAB. The COE has advised that the estimated amount of

$250,000 per solicitation package review would still apply. Thus it can be expected that the cost of presolicitation design package reviews will be about $1 million. The personnel resource cost of those reviews could be less that $400,000 based on the calculation made using the assumptions stated above.

The cost of on-going reviews and the continuous monitoring performed by the COE was stated as a 1.5 year full-time equivalent effort. Using the adjusted rate for Huntsville from Table 6 and Table 7 the costs can be estimated as follows:

1994 Adjusted Rate times 0.75 years effort = $26.88 x 1,565.3 hours = $ 42,075
1995 Adjusted Rate times 1.50 years effort = $27.49 x 3,130.5 hours = $ 86,057
Personnel Cost for 1994 and 1995 COE On-going Reviews = $128,132

Using the national raise amount of 2.4 percent, the 1996 GS-12, step 5 rate for Huntsville is calculated to be approximately $28.15. If another 1.5 years of effort is expended for 1996, the cost would be approximately $88,124 ($28.15 times 3,130.5 hours). From these data points, the conclusion can be made that the on-going cost to the COE for monitoring the specifications and standards would be less than $100,000 annually.

Cost incurred by the PM office for reviews of the solicitation requirements can be calculated by using the Washington/Baltimore adjusted rate times the estimated number of hours to perform the review. The initial review was performed in 1994, therefore the adjusted rate of $26.92 was used. This review included personnel from the Huntsville COE and the IOC contracting offices. The Rest of the U.S. salary rates apply to IOC contracting office personnel. No attempt was made to isolate these personnel costs as cost of temporary duty would more than off set the salary differences. Based on the assumptions used for this study the estimated personnel cost of the PM initial review would be $20,190 ($26.92 x 750 hours).

On-going reviews by the PM office are primarily performed by personnel located at the PM office at Aberdeen Proving Ground. The on-going review costs were calculated as follows. For the continuing "how to" reviews the Washington/Baltimore Adjusted Rate was used. The rate was applied to five months effort in 1994 and 12 months effort in 1995. This calculation resulted in the following personnel cost estimate for "how to" reviews:

1994 Adjusted Rate times five months effort = $26.92 x 500 hours = $13,460.
1995 Adjusted Rate times 12 months effort = $27.78 x 1,200 hours = $33,336.
Personnel Cost for 1994 and 1995 PM "How To" Reviews = $46,796.

A 1996 rate of $28.45 applies to the Washington/Baltimore area using the 2.4 percent national raise. If the PM continues to use 100 hours a month for the "how to" review, the cost of the effort would be about $34,140 ($28.45 times 1,200 hours).

The second type of on-going reviews being performed by the PM office is the CDRL reduction and commercial equipment conversion reviews. Using the same assumptions for adjusted rates for the Washington/Baltimore region with an estimated average of 450 hours per month review time, the following personnel costs were calculated:

1994 Adjusted Rate times 5 months effort = $26.92 x 2,250 hours = $ 60,570.
1995 Adjusted Rate time 12 months effort = $27.78 x 5,400 hours = $150,012.
Personnel Cost for 1994 and 1995 PM CDRL and Equipment Reviews = $210,582.

Projecting the cost for 1996, using the same assumptions as the "how to" review, would estimate the personnel cost for continuing these reviews at $153,630 ($28.45 times 5,400 hours).

The information received from the PM indicates significant conversion of unique military specified GFE to commercial equipment. Estimates of cost avoidance provided by the U.S. Army Competition Advocate General when commercially available equipment is

procured in lieu of military unique equipment range from 10 to 20 percent. The current estimate of $15 million of commercial equipment that has now been identified for competition can be expected to provide from $1.5 to $3 million of cost avoidance per new site. As the equipment for the Tooele and Anniston sites had been procured at the time of this study, the cost avoidance prediction may be applied to the remaining six sites. From these calculations, it is possible to estimate projected cost avoidance of from $9 to $18 million.

The following section will provide an analysis of the information received regarding the potential affects that conversion of specifications and standards to commercial or performance on the EPA permitting process for the CSDP.

D. EPA PERMIT PROCESS ANALYSIS

The fourth subsidiary question asks, "What are the potential affects of the conversion process on EPA approvals and certification requirements?" The delay to the CSDP due to the requirement to obtain EPA permits for construction and operation of the demilitarization facilities has been documented throughout this research effort. In addition to obtaining information and opinions on this area of potential impacts from the Government offices involved in the program, a not-for-profit institution that is concerned with the progress of the disposal of these lethal weapons was asked to comment. The analysis of their comments is provided below.

The PM and COE representatives that responded to this question were the most optimistic about mitigation of permit delays. Both offices felt that if the reviews addressed the risks involved in the program and ensured that the current quality assurance levels and performance parameters were not altered, the EPA permits and the ability to obtain them

should not be affected. These offices agreed that if the quality or safety levels contained in the RCRA application are not altered by changes in the specifications and standards, there would not be a requirement to submit documentation to the EPA for an amended permit.

The contracting office and the representative from the not-for-profit organization were less optimistic about potential delays. The concerns voiced by these organizations were based on the past history of public interest groups. There is a distinct possibility of delay when concerned citizens and other interest groups obtain information on changes to the CSDP. When these entities do not understand the reason for the change or cannot interpret the data in a manner that would allay their fears regarding the health and environmental issues surrounding the program, objections to the changes will be lodged. The need to keep the public informed appears to be a fundamental premise that must be adhered to in this program to blunt the impact of public interest groups' influence on the EPA process.

The information received in this area is of the nature that only speculation on the possible impacts can be made. When the current program schedule at Figure 3 is examined, it is evident that any additional program delays will cause the demilitarization process to exceed the current mandated completion schedule. As no RCRA permit changes have been requested or required as a result of conversions that have already been accomplished, the program schedule impact cannot be predicted at this time. However the CSDP PM must weigh the risks of changes that affect safety and quality levels carefully if schedule impacts are to be avoided.

The final question of this research regarding contract type and measuring contractor performance is addressed in the next section of this chapter.

E. CONTRACT TYPE AND PERFORMANCE ANALYSIS

The final area of this research asked two questions. One question was, "To what extent will contract type for the CSDP be affected by predominant use of performance specifications?" The second question asked, "What measurement techniques could be used to evaluate contractor performance?"

The COE is the ACO for the construction phase of the contracts and chose not to provide input in this area. The following discussion is the researcher's reasoning for the COE declination to comment in this area. For the construction requirements, the COE considers the specifications to be performance oriented and primarily based on commercial specifications and standards. It was also noted that for the Anniston, Umatilla, and Pine Bluff solicitations the construction phases are contemplated to be firm-fixed-price line items. There is no reason to believe at this time that the future solicitations will not use firm-fixed-price for the construction phase. Use of firm-fixed-price for this phase means that an award fee plan for construction will not be required and the COE will accept or reject work under this phase of the program in accordance with well established COE procedures and processes.

An important issue that needs to be addressed is the expectation that the COE will utilize its partnering concept for these contracts. Use of partnering in these contracts would open communication channels and lessen the adversarial relationships that have historically been prevalent in the contract administration arena.

If the COE proposes use of their partnering concept and it is successful in convincing the contractors to participate in the process, improved outcomes can be expected. Some areas of improvement that may be expected include those listed below.

- Reduced cost growth.
- Fewer claims and litigation.
- Accident rate reduction.
- Encouragement of contract suggestions to change the requirements that can produce cost savings and prevent future problems.

The benefits of the use of fixed-price contracts for construction coupled with the partnering concept are discussed above to show that performance oriented and commercial specifications have probably already had a positive impact on program cost.

The responses received from the contracting office and the PM office were very optimistic about being able to convert portions of the contracts to some form of completion arrangement. It is not inherently clear from the discussions with these offices that conversion to performance and commercial specifications is the main reason that a change to a different contract type may be expected. Although it was felt that fixed-price arrangements could be an expected outcome to the conversion process, the PM representative proceeded to discuss performance evaluation plans that are normally applied only to cost type contracts. The contracting officer discussed the risk aspects of the performance but reserved speculation on the degree of risk or to whom that risk would shift.

There appears to be several conflicting goals in the program that will need to be resolved prior to addressing the type of contractual arrangement that best fits the various phases of the program. The PM sees the conversion to performance and commercial specifications and standards as allowing more fixed-price arrangements. However, this shift of performance risk to the contractor would normally be construed as one rationale for the contractor to prefer cost type arrangements, thus mitigating possible losses due to unexpected cost. More fiscal constraints are being placed on the program due to reduced budgets. This

is causing the need to control cost. The program schedules are under pressure due to the likelihood of continued delays in obtaining required permits to proceed. Fixed-price type arrangements would provide contractual benefits of ensuring program cost stability with a requirement for the contractor to deliver the service as scheduled. However, these benefits would only be received if there are minimal program changes. The likelihood of a program of this nature, with performance over an extended period of time, not experiencing some significant program changes is remote.

The acquisition strategy for this program requires total system type procurement for each of the demilitarization sites. This strategy means that a single contract can be expected to be in effect from five to nine years. Each contract has multiple phases with the potential for changes in specifications and standards in each phase. Further complicating the contract administration is the potential that an alternate technology may be introduced and mandated for the program. As of March 1996 there are three different contractors for the three sites where contracts have been awarded. Each site has a different mix of munitions to be demilitarized. All of these factors are significant considerations when determining contract type. In order to convert portions or phases of the contracts to fixed-price completion forms, the contracting officer must include language in the contract that will allow the renegotiation of line items or phases of contract performance. By so doing the Government can take advantage of those areas where fixed-price arrangements can be used and move toward utilization of performance based criteria for incentive or award fees.

Specific performance criteria that could be used in evaluation of contractor performance was not provided by the contracting officer or the PM representative. The PCO

advised that the current contracts at Johnston Atoll and Tooele are cost type contracts that continue to rely on evaluation of how the contractor performed the task in lieu of the outcomes of the task. The PCO also advised that contracts resulting from the current and future solicitations will evaluate the contractor's performance in the following areas.

- **Environment/Safety**--(e.g., environmental compliance, personal and operational safety.).
- **Operations**--(e.g., achieving required through-put rates, efficient changeover, closure efficiency.).
- **Cost/Schedule**--(e.g., cost variance performance from the Cost Performance Report, management/effectiveness in controlling and/or reducing costs, providing timely and accurate data, meeting milestones.).
- **Performance/Support**--(e.g., personnel practices, property storage, transportation, design interface, logistics, maintenance, suspense/reports, contract management, meeting proposed and/or established goals for small business plan.). (Loehrl, 1996)

The criteria identified above appear to be in accordance with the contract performance requirements and coincide with the stated program hierarchy of priorities. Without the exact statement or plan of how the contractor will be evaluated against these criteria, an evaluation of the appropriateness of the criteria would not be credible.

F. SUMMARY

The analysis contained in this chapter looked at the information received from the surveys and interviews for each of the subsidiary research questions and provided the researcher's perspective on that material. It was recognized that those offices involved in the military specification and standard conversion process used a similar logic that was diagramed into a decision tree that could be used for similar efforts in this area. The process evaluation

also disclosed that coordination between and among the offices was similar for each organization.

The material received on cost and schedule impacts shows that the specification and standard review process has not had an impact on overall program schedules although there may have been some impact on individual solicitation milestones. The cost of the reviews was analyzed using some basic assumptions about personnel grade levels and compensation rates. Only personnel cost for the reviews was used as the costs for such items as temporary duty, supplies and materials, and other overhead expenses were not available. A calculation of the estimated personnel cost of reviews for the COE and PM is summarized below.

	Expended (94/95)	Projected (96)
COE:		
On-going Constructibility Reviews	$128,132	$88,124
PM:		
Initial Spec/Std Review	20,190	
"How To" Reviews	46,796	34,140
CDRL/Equipment Reviews	210,582	153,630
Totals	$405,700	$275,894

The COE has estimated the cost of $1 million if the design package is required to be included in future solicitation package reviews. No specific cost for specification and standard reviews for the contracting office was identified. The reviews performed by that office would have been required irregardless of the DoD policy on specifications and standards. Projected savings from the equipment reviews alone were calculated to be from $9 to $18 million.

The analysis of the information received in response to the questions on possible affects on the EPA permitting process shows that there is a distinct potential for further delays if the process results in requests for changes in the RCRA application regarding safety and quality levels. This area is speculative as no application changes have been requested at this time. In the area of contract type and contractor performance measurement techniques, the information received was sparse due to the speculative nature of predicting the future. However, the analysis indicates that there is a potential for moving to completion type contract arrangements and using more results oriented contractor performance measurement criteria.

The final chapter of this thesis will provide conclusions of this research in the context of the primary research question and make recommendations based on analysis of the information received. The chapter concludes with areas for further research.

VI. CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the conclusions of this thesis, offers recommendations, and provides suggested areas for further research. The conclusions and recommendations are intended to provide some insight on how acquisition reform efforts have benefited the CSDP. It is hoped that this discussion will promote acquisition reform in other DoD programs.

A. CONCLUSIONS

The objective of this research was to determine the impact of implementing the acquisition reform requirement to use performance specifications on the contracting effort for the CSDP. The objective was expanded to include commercial specifications and standards due to their integral relationship during the conversion process. From the earliest documented acquisition reform commissions to the present, attempts have been made to bring the DoD procurement process in alignment with commercial practices. Multiple published reports, regulatory changes, and legislation have called for consideration of agencies to abandon unique military specifications and standards in favor of their commercial equivalents or performance statements of work. None of the calls for action in this arena have been as successful as the Secretary of Defense directive issued on June 29, 1994. Although this memorandum was never formally or officially promulgated by the DoD acquisition regulations, the implementation of the policy has had far reaching influence on the acquisition community.

The CSDP has benefited from its implementation of the direction set to convert military unique specifications and standards to commercial or performance specifications.

The process developed by the offices involved in the conversion endeavor is a logical decision tree that can be applied to any program seeking to convert military specifications and standards. The organizations involved in the reviews have successfully used this process in areas other than the quest to eliminate unique Federal Government specifications. The PM applied the logic of the review process to unique GFE, CDRL item, and "how to" language buried within the requirements packages for the program's solicitations.

The conversion process is human resource intensive and requires an extensive coordination effort to ensure that quality and safety are not compromised by change recommendations. However, the equipment review alone has a potential of producing cost avoidance of up to $18 million. There is anecdotal evidence that conversions to commercial and performance specifications, process changes resulting from the "how to" language being replaced with "outcome expected" statements, and elimination of non-value added CDRL items can result in substantial cost reduction and avoidance. It is intended that the conversion efforts undertaken by the CSDP requirements developers will assist the program in meeting its LCCE.

The impact on program schedules due to specification and standard reviews has been minimal and has not resulted in any changes in overall program completion timetables. Some individual solicitation milestones were adjusted to allow incorporation of changes recommended by the review teams. However, these changes had no impact on overall program completion schedules. There has not been a need for the CSDP PM to request changes to the RCRA permit applications being processed for approval by the EPA as a result of changing requirements to commercial and performance specifications. The lack of the need

for amendments to the EPA permit applications is fortunate since any request to amend pending applications or current permits is likely to cause delay to program schedules. The delays experienced in obtaining EPA permits have been the major cause of CSDP schedule slippages. The EPA is required to ensure that the mandates for pollution controls set by statute are enforced. During the coordination process the EPA must take into consideration the interests of environmental and other public sector organizations. The process of hearing, deliberating, and addressing these public interests is time consuming and often beyond the control of the EPA as constituent concerns are often elevated to Congressional members. In turn Congressional members bring pressures that delay permit issuance until constituent concerns are addressed. The PM should expect continued program delays since the need to address constituent concerns will very likely exist until the last chemical weapon is destroyed.

In the future, the CSDP may be able to consider moving to more completion oriented types of pricing arrangements for additional line items or phases of contracts awarded for demilitarization projects. Although changes to commercial and performance specifications may be a factor in the ability to craft these arrangements, other compelling factors also must be resolved. One such issue is the inherent financial risk due to potential for accidents and resulting claims or fines. Reaching agreement between the Government and the contractors on how that risk should be shared is critical and can influence the type of pricing arrangement selected. Another issue is Government confidence that program changes will not be substantial enough in the out years of the program to preclude a fixed-price arrangement for certain contact line items or phases of operation.

The conversion pursuits of the CSDP have positive influence on program cost with minimal schedule repercussion. The review processes follow a logical methodology that may be applied to multiple areas of consideration to improve the solicitation document. The improved solicitation documents have enhanced the source selection opportunities to select the best value alternative. An improved solicitation, with the ability to select best value alternatives, and enhanced contract administration processes such as partnering should, ultimately, lead to a better contractual instrument and improved contractor performance. At the very least, these methods should furnish the framework needed for the contractor to deliver the performance expected in a superior manner while providing the contractor and the Government flexibility to respond rapidly to improved technology and better practices as they are identified. The DoD policy for conversion of military specifications and standards to performance statements and commercial equivalent specifications and standards has been beneficial to the CSDP. Continued efforts in this area should enhance the ability to demilitarize the deteriorating stockpile of lethal chemical weapons within projected cost while maintaining or improving the quality and safety levels currently set by EPA permit regulators.

The following section provides recommendations intended to enhance the ability of program participants to efficiently and effectively execute their respective areas of the CSDP.

B. RECOMMENDATIONS

The CSDP has made significant progress in the improvement of the management of the chemical weapons disposal process. The following recommendations are offered as potential areas that may assist the PM in achieving the ultimate goal of the program, to safely

dispose of lethal chemical weapons within the projected LCCE and by the mandated completion date.

Construction Design Review: As explained in this thesis, there is reason to believe that significant saving or cost avoidances will be achieved for the CSDP through the past and on-going specification and standard reviews and conversion process. There is sufficient time to thoroughly review the construction design package prior to issuance of the next solicitations. The cost estimate to review that package has been set at $250,000 for each solicitation remaining to be issued for the program. Investment in a complete review of the design package has the potential of providing additional saving or cost avoidance for the program. The need for more than one review of the design package should be explored. Congress has mandated that the same design should be applied for each of the sites. After the initial review is completed, follow-on reviews may need only address approved changes in the design configuration. Additionally, an evaluation of the estimates of personnel costs for past reviews and reviews projected for 1996 appears to be in conflict with the estimate for the design package review. All other reviews are human resource intensive, therefore it can be concluded that the major cost for the design package review will be for personnel. Using the rates provided in Figure 7 for the Huntsville region adjusted for projected pay raises, the personnel cost could likely be less than $100,000 for the estimated 3,000 hours to complete a design package review. Cost to perform the design review may be substantially less than expected. For the above reasons, it is believed that a specifications and standards review of the construction design package should be pursued. This review is likely to ultimately lead to identification of potential savings or cost avoidances that may be reaped in this area.

Modification of Current Contracts: On-going reviews performed by the CSDP PM have the possibility of identifying significant areas for change to benefit the cost and schedule of the program. When these items are identified and the risk assessment does not cause concern about changes in quality and/or safety, changes to current contracts should be pursued. The PM should also consider requesting the contracting office to solicit changes from the current operating contractors to enhance performance while providing opportunities for cost and schedule efficiencies. These change recommendations need not be limited to conversion of military specifications and standards to performance or commercial standards. They also should include the areas of continuing review being performed by the CSDP organizational elements.

Partnering Concept: The partnering concept used by the COE in many of its construction projects has proven to accrue cost and schedule benefits. The process has been highly touted by the GAO and has been widely adopted by many recognized highly efficient and effective private sector companies. By adopting this concept throughout the life of the total systems contract for each facility site, significant cost and time savings may be expected. The following quote of LTG A.E. Williams, Commander, U.S. Army Corps of Engineers, in Policy Memorandum 4, dated March 31, 1993, indicates the rationale for using the partnering concept:

> Because partnering develops positive and mutually beneficial relationships, it creates a climate characterized by trust and cooperation. It creates a relationship between two or more parties and promotes teamwork. Partnering seeks to eliminate the 'us' versus 'them' mentality, and to form a 'we' approach for the mutual benefit of the project user, the taxpayers, and the contractor.

Contracting Office RFP Scrubs: These reviews of the solicitation requirements have proved to be beneficial in elimination of unneeded and redundant requirements that add cost to contract performance. However, it is believed that the inclusion of searches for military unique specifications and standards in these reviews is redundant and could be eliminated from the RFP scrub procedure. The PM performs a requirements package review prior to the contracting office RFP scrub. When the PM provides requirements for inclusion in the planned solicitation, all actions to use or convert military specifications and standards should have been accomplished. The PM certification that the review, in accordance with the DoD direction, has been completed and any waivers needed have been obtained should suffice for the contracting file documentation. Further reviews appear to add unnecessary administrative burden and cost to the solicitation process.

Public Relations: When opportunities arise to inform and educate the public about the CSDP and the initiatives being implemented, such opportunities should be used to publicize the specification and standard conversion process. Taking the initiative to advise community and environmental groups of the process and the risk assessments that are continuously made to ensure that quality and safety standards are maintained or exceeded will send more positive signals to these interest groups. These groups have historically been suspicious of Army motives and have continuously kept the PM on the defensive in responding to their concerns. If the Army takes a more positive and proactive position in informing the public what is being changed and considerations for quality and safety built into the process, some credibility may be regained. Should future changes to the EPA permit

applications be required, there is a possibility for less controversy and delay in obtaining an amendment if the public and interest groups have been better informed.

C. AREAS FOR FURTHER RESEARCH

This research focused on the impact of specification and standard acquisition reform on the CSDP. During the research of this topic, several other issues were identified where further research might be of value. These areas of potential research include the following:

1. Contractor Opportunities to Participate in the Process. Research in this area could include the degree that contractors are taking advantage of the opportunities to purpose commercial standards and performance statements in solicitations and for existing contracts. The private sector has been lobbying for a number of years for use of performance statements and commercial specifications and standards. The degree of response to the DoD initiative in this area would provide insight on how serious defense contractors are about these conversions and the benefits or pitfalls they foresee in pursuing these changes. As there were several source selections in process at the time of this research, very little information was obtainable on how the contractors believed they would benefit from the conversion for the CSDP. Research in this area could assist the PM in determining projected program benefits as reflected in reduced costs or performance schedules.

2. Effect of Military Specification and Standard Conversion on Contract Administration. Specifically, research into this subject would address how the performance measures utilized for award fee or incentive fee purposes change as the result of using performance and commercial specifications and standards. The area of potential staff reductions to monitor performance could be included in this research effort as well as the

change in Government and contractor relationships that may result when performance measures change.

3. Shifting of Risk. As less "how to" and more commercial practices and standards, fewer reporting requirements, and more commercial equipment are introduced in the CSDP there should be some degree of shifting of risk to the parties of the contract. Assessment of the risk involved in the conversions and where that risk would be lodged was beyond the scope of this study. With the inherent risks of the CSDP such an analysis would be beneficial to the PM, the EPA, the contractors, and interest groups. It would also serve to assess the plausibility of making certain changes if other critical program elements are adversely affected.

4. Total Package Contracting. There are continuing arguments among procurement professionals on the advisability of using total package procurement for programs that are subject to change due to controversy or of long duration. The unpredictable nature of programs that contain these elements usually tends to cause preference for shorter term, well defined contracting arrangements. The CSDP has tried both approaches for the site facility and operations contracts. A study of the benefits and shortcomings of using total package contracting for the CSDP may be helpful in planning of future acquisition strategy in programs of similar nature.

5. Obtaining EPA Permits. The process of obtaining EPA permits has been especially arduous for the CSDP. Research in this area may be able to sort out the obstacles that need to be overcome. This controversial program has more than its share of objections with the EPA permitting process. Other programs might be able to use the lessons learned by the

CSDP, especially in the area of prediction of performance schedules based on receipt of required permits. Areas of research could include the time needed or that should be allowed in programs to obtain the permits, types of assistance the PM can give the EPA to expedite the process, and the nature of education necessary to assure the public that permits should be granted.

6. Public Influence on Defense Programs. Involvement of public interest groups in the CSDP has resulted in EPA permit delays and adversarial relationships between DoD and private sector interests. A look into the basis for these inimical positions and ways that they might be overcome or avoided in the future could be of great value to DoD for other programs that face contentious issues and diverse opinions on the appropriate methods for resolving matters of high public concern.

APPENDIX A

List of Abbreviations and Acronyms

AAO	Army Acquisition Organization
ACAT	Acquisition Category
ACO	Administrative Contracting Officer
AIP	Army Implementation Plan
AMC	Army Materiel Command
AMCCOM	Armament, Munitions and Chemical Command
ANAD	Anniston Army Depot
APG	Aberdeen Proving Ground
ASAILE	Assistant Secretary of the Army (Installations, Logistics, and Environment)
ASARC	Army Systems Acquisition Review Council
ASARDA	Assistant Secretary of the Army (Research, Development, and Acquisition)
BGAD	Blue Grass Army Depot
CAAA	Clean Air Act Amendments
CAE	Component Acquisition Executive
CAMDS	Chemical Agent Munitions Disposal System
CCA	Clean Air Act
CCRT	CSDP Concept Review Team
CDRL	Contract Data Requirements List
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CICA	Competition in Contracting Act
COE	Corps of Engineers
CONUS	Continental United States
CPAF	Cost-Plus-Award-Fee
CPFF	Cost-Plus-Fixed-Fee
CSDP	Chemical Stockpile Destruction Program
CWA	Clean Water Act
CWC	Chemical Weapons Convention
DA	Department of the Army
DAB	Defense Acquisition Board
DFARS	Defense Federal Acquisition Regulation Supplement
DLSIE	Defense Logistics Studies Information Exchange
DOD	Department of Defense

DRE	Destructiion and Removal Efficiency
DTIC	Defense Technical Information Center
DUSD(AR)	Deputy Under Secretary of Defense for Acquisition Reform
EIS	Environmental Impact Statement
EPA	Environment Protection Agency
FAR	Federal Acquisition Regulation
FRAB	Functional Requirements Authentication Board
FFCA	Federal Facilities Compliance Act
FFP	Firm-Fixed-Price
FY	Fiscal Year
GFE	Government Furnished Equipment
GAO	General Accounting Office
GOCO	Government Owned/Contractor Operated
GS	General Schedule
HQ	Headquarters
HCA	Head of Contracting Activity
HR	House of Representatives
IG	Inspector General
IOC	Industrial Operations Command
IPT	Integrated Product Team
JACADS	Johnston Atoll Chemical Agent Disposal System
LCCE	Life Cycle Cost Estimate
MAP	Master Action Plan
MDA	Milestone Decision Authority
MDAP	Major Defense Acquisiton Program
NAAP	Newport Army Ammunition Plant
NAAQS	National Ambient Air Quality Standards
NAS	National Academy of Sciences
NRC	National Research Council
OIPT	Overarching Integrated Process Team
OVT	Operational and Verification Testing
PAISC	Program and Integration Support Contract
PAT	Process Action Team
PBA	Pine Bluff Arsenal
PCO	Procuring Contracting Officer
PDA	Program Decision Authority
PEO	Program Executive Officer
PL	Public Law
PM	Program Manager or Program Management
PMCD	Program Manager for Chemical Demilitarization
PM-CSD	Program Manager-Chemical Stockpile Disposal

PSD	Prevention of Serious Deterioration
PUDA	Pueblo Depot Activity
RCRA	Resource Conservation and Recovery Act
RFP	Request for Proposals
RMA	Rocky Mountain Arsenal
ROD	Record of Decision
SDWA	Safe Drinking Water Act
SIE	Standards Improvement Executive
SOW	Statement of Work
Spec/Std	Specification/Standard
TEAD	Tooele Army Depot
TSCA	Toxic Substance Control Act
UMDA	Umatilla Depot Activity
USACMDA	U.S. Army Chemical Material Destruction Agency
USAEHA	U.S. Army Environmental Health Agency
USD(A&T)	Under Secretary of Defense for Acquisiton and Technology

APPENDIX B

Thesis Interview Questions

Primary: ***What impact will the acquisition reform requirement to use performance specifications have on the Chemical Stockpile Disposal Program (CSDP) contracting efforts?***

Subsidiary Question 1: What are the nature and extent of the CSDP and what are the critical issues associated with it?

Interview Questions

1. What are the characteristics of this program that make it unique as an ACAT ID program?

2. What measures are critical to ensure program success? (Cost, Schedule, Safety, Environmental Compliance, Disposal Methods, Treaty Compliance)

3. What Governmental Agencies are involved in the program? Please include addresses and telephone numbers where possible.

a. Federal
   Congressional Committees_____
   Executive Offices_____
b. DOD_____
   Army _____
   Other Services _____
   Environmental Protection Agency _____
   Others_____
b. State
   EPA_____
   Others _____
c. Private Public Interest Groups _____

4. How do the offices listed in question four influence the program?

5. Which public interest groups are interested in the CSDP? What are their specific agendas and how do they influence the program?

Subsidiary Question 2: What are the activities necessary to convert current specifications to predominantly performance specifications?

Interview Questions:

1. What Government activities or offices are involved in the specification conversion effort?

2. Is there a formal structure (PAT, IPT) in place to review the CSDP specifications? If so what is its structure? If there is an informal structure, what is it?

3. Which offices or activities will need to coordinate the purposed changes to the specifications? Can you provide names of the activities and their level of authority.

4. Will the specification review for all phases of performance in the solicitation or contract be performed by a single office? If so identify that office. If not, identify the responsible offices or agencies. Single Office_____

a. Construction _____
b. Equipment Purchase_____
c. Equipment Installation _____
d. Systemization/Testing _____
e. Operations, Chemical Destruction _____
f. Operations, Maintenance _____
g. Close Down _____

5. Has a standard process been established to review the solicitation requirement document, identify the military specifications and standards, and determine the action required? If so, what is the process? If not, how will the review be performed?

6. Will current operating contractors or offerors on current solicitations be invited to participate in the specification conversion process? If yes, in what areas and to what extent?

Subsidiary Question 3: What is the affect on schedules and cost to accomplish this conversion process?

Interview Questions

1. What is the anticipated time line to accomplish the review?

a. Identify military specifications and standards_____

b. Determination if specification/standard is needed_____
c. Determine if a commercial specification or standard is available_____
d. Determine if feasible to convert to performance language_____
e. Prepare "what to do" instead of "how to" specification_____
f. Process waivers to use military specification or standard_____

2. What are the estimated personnel hours and costs to accomplish the review?

a. At the specification review activity level_____

1. Identify military specifications and standards_____
2. Determination if specification/standard is needed_____
3. Determine if a commercial specification/standard is available_____
4. Determine if feasible to convert to performance language_____
5. Prepare "what to do" instead of "how to" specification_____
6. Process waivers to use military specification/standard_____

b. At coordinating/approval levels_____

1. Determination if specification/standard is needed_____
2. Determine if a commercial specification/standard is available_____
3. Determine if feasible to convert to performance language _____
4. Prepare "what to do" instead of "how to" specification_____
5. Process waivers to use military specification/standard_____

3. What program delays, if any, have been experienced to date due to the review process? What were the cause and length of any experienced delays?

4. What costs have been experienced at this date? What is the estimated cost to complete the review?

5. Will changes to current contracts be considered? If so, what costs or savings can be expected? What schedule improvements or delays can be expected?

6. How will savings be determined?

7. How will risk to schedules, costs, quality, and delivery be measured?

8. Are there possible delays to solicitation release, source selection, or award due to the specification review process? If so, what slippage should be anticipated?

Subsidiary Question 4: What are the potential affects of the conversion process on EPA approvals and certification requirements?

Interview Questions

1. Will EPA be involved in the specification review process? If so how, at what level (Federal, State, local) and in what capacity at each level?

2. Is it anticipated that additional testing will be required due to specification conversions?

3. Is there a potential that conversion to commercial or performance specifications will increase risks in liability to the contractor? To the Government? To the facility commander?
If so, what is the liability. Is the risk quantifiable and, if so, how will it be measured?

4. Will conversions to performance specifications compromise the Government's ability to meet mandated requirements? If so, how?

5. Will use of performance specifications limit or transfer any legal responsibilities under environmental laws from the installation commander or other Government representatives to the contractor? If so, what will be transferred?

Subsidiary Question 5: To what extent will contract type for the CSDP be affected by predominant use of performance specifications? What measurement technique could be used to evaluate contractor performance?

Interview Questions

1. Is there a coordination process anticipated to evaluate specification conversion impact on contemplated contract type? If so, what is it?

2. What criteria and measures are currently used to evaluate contractor performance?

3. How will contractor performance evaluation criteria be affected by specification conversion? Can you provide examples?

4. Will the amount of the award fee pool be affected by specification conversion? If so, how?

THE SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

10 OCT 1989

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS

SUBJECT: Environmental Management Policy

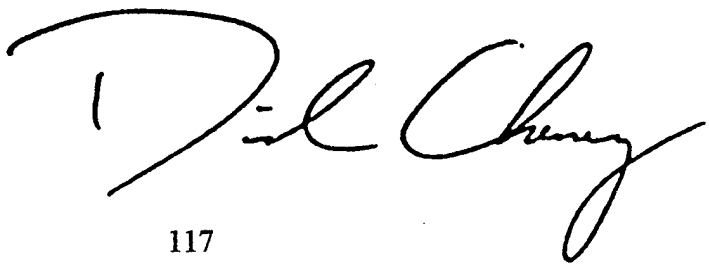
This Administration wants the United States to be the world leader in addressing environmental problems and I want the Department of Defense to be the Federal leader in agency environmental compliance and protection.

Federal facilities, including military bases, must meet environmental standards. Congress has repeatedly expressed a similar sentiment. As the largest Federal agency, the Department of Defense has a great responsibility to meet this challenge. It must be a command priority at all levels. We must demonstrate commitment with accountability for responding to the Nation's environmental agenda. I want every command to be an environmental standard by which Federal agencies are judged.

The first priority of our environmental policy must be to integrate and budget environmental considerations into our activities and operations. This will decrease our future liabilities and costs for our people. The effort begins and ends with our people. We need the right people at the right place with the right training.

It is also extremely important that we communicate clearly what we are doing to address our environmental concerns. We need to work harder at telling our environmental success stories and solving our problems in an open, cooperative way with the public and also appropriate regulatory authorities. The universal recognition of effective DoD environmental compliance and stewardship activities is the surest way to maintain our access to the air, land, and water we need to maintain and improve our mission capability.

We must be fully committed to do our part to meet the worldwide environmental challenge and I know I can count on your support to ensure that we are successful in that effort.



APPENDIX D

THE SECRETARY OF DEFENSE
WASHINGTON, DC 20301

29 JUN 1994

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
COMPTROLLER
ASSISTANT SECRETARY OF DEFENSE (COMMAND, CONTROL, COMMUNICATIONS, AND INTELLIGENCE)
GENERAL COUNSEL
INSPECTOR GENERAL
DIRECTOR OF OPERATIONAL TEST AND EVALUATION
DIRECTORS OF THE DEFENSE AGENCIES
COMMANDER-IN-CHIEF, U.S. SPECIAL OPERATIONS COMMAND

SUBJECT: Specifications & Standards – A New Way of Doing Business

To meet future needs, the Department of Defense must increase access to commercial state-of-the-art technology and must facilitate the adoption by its suppliers of business processes characteristic of world class suppliers. In addition, integration of commercial and military development and manufacturing facilitates the development of dual-use processes and products and contributes to an expanded industrial base that is capable of meeting defense needs at lower costs.

I have repeatedly stated that moving to greater use of performance and commercial specifications and standards is one of the most important actions that DoD must take to ensure we are able to meet our military, economic, and policy objectives in the future. Moreover, the Vice President's National Performance Review recommends that agencies avoid government-unique requirements and rely more on the commercial marketplace.

To accomplish this objective, the Deputy Under Secretary of Defense (Acquisition Reform) chartered a Process Action Team to develop a strategy and a specific plan of action to decrease reliance, to the maximum extent practicable, on military specifications and standards. The Process Action Team report, "Blueprint for Change," identifies the tasks necessary to achieve this objective. I wholeheartedly accept the Team's report and approve the report's primary recommendation to use performance and commercial specifications and standards in lieu of military specifications and standards, unless no practical alternative exists to meet the user's needs. I also accept the report of the Industry Review Panel on Specifications and Standards and direct the Under Secretary of Defense (Acquisition and Technology) to appropriately implement the Panel's recommendations.

I direct the addressees to take immediate action to implement the Team's recommendations and assign the Under Secretary of Defense (Acquisition and Technology) overall implementation responsibility. I direct the Under Secretary of Defense (Acquisition and Technology) to immediately arrange for reprogramming the funds needed in FY94 and FY95 to efficiently implement the recommendations. I direct the Secretaries of the Military Departments and the Directors of the Defense Agencies to program funding for FY96 and beyond in accordance with the Defense Planning Guidance.

Policy Changes

Listed below are a number of the most critical changes to current policy that are needed to implement the Process Action Team's recommendations. These changes are effective immediately. However, it is not my intent to disrupt on-going solicitations or contract negotiations. Therefore, the Component Acquisition Executive (as defined in Part 15 of DoD Instruction 5000.2), or a designee, may waive the implementation of these changes for on-going solicitations or contracts during the next 180 days following the date of this memorandum. The Under Secretary of Defense (Acquisition and Technology) shall implement these policy changes in DoD Instruction 5000.2, the Defense Federal Acquisition Regulation Supplement (DFARS), and any other instructions, manuals, regulations, or policy documents, as appropriate.

Military Specifications and Standards: Performance specifications shall be used when purchasing new systems, major modifications, upgrades to current systems, and nondevelopmental and commercial items, for programs in any acquisition category. If it is not practicable to use a performance specification, a non-government standard shall be used. Since there will be cases when military specifications are needed to define an exact design solution because there is no acceptable non-governmental standard or because the use of a performance specification or non-government standard is not cost effective, the use of military specifications and standards is authorized as a last resort, with an appropriate waiver.

Waivers for the use of military specifications and standards must be approved by the Milestone Decision Authority (as defined in Part 2 of DoD Instruction 5000.2). In the case of acquisition category I D programs, waivers may be granted by the Component Acquisition Executive, or a designee. The Director, Naval Nuclear Propulsion shall determine the specifications and standards to be used for naval nuclear propulsion plants in accordance with Pub. L. 98-525 (42 U.S.C. §7158 note). Waivers for reprocurement of items already in the inventory are not required. Waivers may be made on a "class" or item basis for a period of time not to exceed two years.

Innovative Contract Management: The Under Secretary of Defense (Acquisition and Technology) shall develop, within 60 days of the date of this memorandum, Defense Federal Acquisition Regulation Supplement (DFARS) language to encourage contractors to propose non-government standards and industry-wide practices that meet the intent of the military specifications and standards. The Under Secretary will make this language effective 180 days after the date of this memorandum. This language will be developed for inclusion in both requests for proposal and in on-going contracts. These standards and practices shall be considered as alternatives to those military specifications and standards cited in all new contracts expected to have a value of $100,000 or more, and in existing contracts of $500,000 or more having a substantial contract effort remaining to be performed.

Pending completion of the language, I encourage the Secretaries of the Military Departments and the Directors of the Defense Agencies to exercise their existing authority to use solicitation and contract clause language such as the language proposed in the Process Action Team's report. Government contracting officers shall expedite the processing of proposed alternatives to military specifications and standards and are encouraged to use the Value Engineering no-cost-settlement method (permitted by FAR 48.104-3) in existing contracts.

Program Use of Specifications and Standards: Use of specifications and standards listed in DoD Instruction 5000.2 is not mandatory for Program Managers. These specifications and standards are tools available to the Program Manager, who shall view them as guidance, as stated in Section 6-Q of DoD Instruction 5000.2.

Tiering of Specifications and Standards: During production, those system specifications, subsystem specifications and equipment/product specifications (through and including the first-tier references in the equipment/product specifications) cited in the contract shall be mandatory for use. Lower tier references will be for guidance only, and will not be contractually binding unless they are directly cited in the contract. Specifications and standards listed on engineering drawings are to be considered as first-tier references. Approval of exceptions to this policy may only be made by the Head of the Departmental or Agency Standards Improvement Office and the Director, Naval Nuclear Propulsion for specifications and drawings used in nuclear propulsion plants in accordance with Pub. L. 98-525 (42 U.S.C. §7158 Note).

New Directions

Management and Manufacturing Specifications and Standards: Program Managers shall use management and manufacturing specifications and standards for guidance only. The Under Secretary of Defense (Acquisition and Technology) shall develop a plan for canceling these specifications and standards, inactivating them for new designs, transferring the specifications and standards to non-government standards, converting them to performance-based specifications, or justifying their retention as military specifications and standards. The plan shall begin with the ten management and manufacturing standards identified in the Report of the Industry Review Panel on Specifications and Standards and shall require completion of the appropriate action, to the maximum extent practicable, within two years.

Configuration Control: To the extent practicable, the Government should maintain configuration control of the functional and performance requirements only, giving contractors responsibility for the detailed design.

Obsolete Specifications: The "Department of Defense Index of Specifications and Standards" and the "Acquisition Management System and Data Requirements Control List" contain outdated military specifications and standards and data requirements that should not be used for new development efforts. The Under Secretary of Defense (Acquisition and Technology) shall develop a procedure for identifying and removing these obsolete requirements.

Use of Non-Government Standards: I encourage the Under Secretary of Defense (Acquisition and Technology) to form partnerships with industry associations to develop non-government standards for replacement of military standards where practicable. The Under Secretary shall adopt and list in the "Department of Defense Index of Specifications and Standards" (DODISS) non-government standards currently being used by DoD. The Under Secretary shall also establish teams to review the federal supply classes and standardization areas to identify candidates for conversion or replacement.

Reducing Oversight: I direct the Secretaries of the Military Departments and the Directors of the Defense Agencies to reduce direct Government oversight by substituting process controls

and non-government standards in place of development and/or production testing and inspection and military-unique quality assurance systems.

Cultural Changes

Challenge Acquisition Requirements: Program Managers and acquisition decisionmakers at all levels shall challenge requirements because the problem of unique military systems does not begin with the standards. The problem is rooted in the requirements determination phase of the acquisition cycle.

Enhance Pollution Controls: The Secretaries of the Military Departments and the Directors of the Defense Agencies shall establish and execute an aggressive program to identify and reduce or eliminate toxic pollutants procured or generated through the use of specifications and standards.

Education and Training: The Under Secretary of Defense (Acquisition and Technology) shall ensure that training and education programs throughout the Department are revised to incorporate specifications and standards reform.

Program Reviews: Milestone Decision Authority (MDA) review of programs at all levels shall include consideration of the extent streamlining, both in the contract and in the oversight process, is being pursued. The MDA (i.e., the Component Acquisition Executive or his/her designee, for all but ACAT 1D programs) will be responsible for ensuring that progress is being made with respect to programs under his/her cognizance.

Standards Improvement Executives: The Under Secretary, the Secretaries of the Military Departments, and the Director of the Defense Logistics Agency shall appoint Standards Improvement Executives within 30 days. The Standards Improvement Executives shall assume the responsibilities of the current Standardization Executives, support those carrying out acquisition reform, direct implementation of the military specifications and standards reform program, and participate on the Defense Standards Improvement Council. The Defense Standards Improvement Council shall be the primary coordinating body for the specification and standards program within the Department of Defense and shall report directly to the Assistant Secretary of Defense (Economic Security). The Council shall coordinate with the Deputy Under Secretary of Defense (Acquisition Reform) regarding specification and standards reform matters, and shall provide periodic progress reports to the Acquisition Reform Senior Steering Group, who will monitor overall implementation progress.

Management Commitment

This Process Action Team tackled one of the most difficult issues we will face in reforming the acquisition process. I would like to commend the team, composed of representatives from all of the Military Departments and appropriate Defense Agencies, and its leader, Mr. Darold Griffin, for a job well done. In addition, I would like to thank the Army, and in particular, Army Materiel Command, for its administrative support of the team.

The Process Action Team's report and the policies contained in this memorandum are not a total solution to the problems inherent in the use of military specifications and standards; however, they are a solid beginning that will increase the use of performance and commercial

specifications and standards. Your leadership and good judgment will be critical to successful implementation of this reform. I encourage you and your leadership teams to be active participants in establishing the environment essential for implementing this cultural change.

This memorandum is intended only to improve the internal management of the Department of Defense and does not create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the Department of Defense or its officers and employees.

William J. Perry

APPENDIX E

THE SECRETARY OF DEFENSE

WASHINGTON, DC 20301-1000

6 DEC 1995

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARY OF DEFENSE (ACQUISITION AND TECHNOLOGY)
UNDER SECRETARY OF DEFENSE (COMPTROLLER)
ASSISTANT SECRETARY OF DEFENSE (COMMAND, CONTROL, COMMUNICATIONS AND INTELLIGENCE)
GENERAL COUNSEL
INSPECTOR GENERAL
DIRECTOR OF OPERATIONAL TEST AND EVALUATION
DIRECTORS OF DEFENSE AGENCIES

SUBJECT: Common Systems/ISO-9000/Expedited Block Changes

My June 29, 1994 memorandum on Specifications and Standards directed the use of performance specifications to the maximum extent practicable, and the development of a streamlined procurement process to modify existing contracts to encourage contractors to propose non-government specifications and industry-wide practices that meet the intent of military specifications and standards which impose government-unique management and manufacturing requirements. Although much progress is being made in applying these principles on new contracts, this progress has itself shown that government-unique requirements on existing contracts prevent us from realizing the full benefits of these changes by requiring, in a single facility, multiple management and manufacturing systems designed to accomplish the same purpose. Because it is generally not efficient to operate multiple, government-unique management and manufacturing systems within a given facility, there is an urgent need to shift to facility-wide common systems on existing contracts as well.

In order to meet our military, economic and policy objectives in the future, and to expedite the transition to this new way of doing business, the direction given in my June 29, 1994, memorandum is hereby revised. In addition to the direction given there for government-unique specifications and standards, I now direct that block changes to the management and manufacturing requirements of existing contracts be made on a facility-wide basis, to unify management and manufacturing requirements within a facility, wherever such changes are technically acceptable to the government. The single point of contact for this effort will be the Administrative Contracting Officer (ACO) assigned to a facility.

The Under Secretary of Defense for Acquisition and Technology shall issue additional guidance necessary to facilitate the Department's streamlined review of contractor's proposals to replace government-unique management and manufacturing requirements in existing contracts with uniform requirements within the contractor's facilities.

We cannot afford to allow "business as usual" to delay this initiative. I therefore request that you and your leadership take an active role in expediting the transition of existing contracts and reprocurements to common systems.

William J. Perry

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